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ORIGINAL ARTICLES

ERYSIPELAS: SYMPTOMS, ETIOLOGY AND PATHOLOGY*

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Erysipelas, because of its extreme infectiousness and the direct danger into which a patient therewith is placed, merits a greater degree of thoughtful attention than it sometimes receives in the world of practice. Long before bacteriology was known in science, our forefathers in medicine had come to know the disease as one worthy of respect. The isolation and study of the bacterial elements concerned in its development gave to medicine the reason for the ravages and spread of erysipelas, and taught the medical man, more particularly the surgeon, to exercise care in the handling, treatment and quarantining of each identified or suspected case. In fact, no conscientious surgeon, having in mind the welfare of his patients, will deal personally with the disease. While the surgeon must avoid cases erysipelatous in character, the medical man may not, though he well knows that it behooves him to exercise every possible precaution against conveying the infection from one case to others.

If these general observations are true, then we would seem justified in entering into a wide discussion of erysipelas.

Little is to be found in literature in regard to the first recognition of erysipelas as a distinct disease. Like many another, it undoubtedly found its place far back in the years, becoming separated from other inflammatory affections as its own peculiarities were recognized. The derivation of the word, "red skin," affords no information, simply directing our minds to a period during which one inflamed skin surface was not distinguished from another, except, perhaps, in the way of degree and results. A definition, brief enough to be so termed, can hardly be considered as worth much more, as a brief definition cannot be phrased to embrace the variations of the disease, or to express the wide symptomatology which may appear in a given case. Therefore to gain a satisfactory idea of erysipelas as the subject stands to-day we must undertake a full discussion of it. To the writer has fallen the task of dealing with

* Read before the Kent County Medical Society, Feb. 14, 1912.

the subject, "Erysipelas: Symptoms, Etiology and Pathology."

No doctor of medicine engaging in his profession will practice long without meeting his first case of erysipelas. It is not an uncommon disease — he may meet it frequently. Thus, as he comes in contact with it he soon learns the cardinal symptoms of such cases as follow the type, and by the same token adopts the treatment seeming best indicated in each case. His results are generally satisfying to himself and his patients, and all is well. But what about his atypical cases? Those for instance in which the onset is unusual, or the complications severe — atypical in any direction, for that matter? These constitute the stumbling blocks in the paths of all practitioners, and while one writing on the subject will do well not to forget the typical, he would be equally remiss in neglecting a review of the atypical symptoms.

Ordinarily there are no premonitory signs in erysipelas. If present, they are not different than such as may be found preceding other illnesses. The patient suffering from headache, malaise, nausea, etc., may exhibit an erysipelas later, but if such symptoms do presage that disease, they are seldom marked. Commonly the onset of the disease is abrupt, a sharp chill with a prompt rise of temperature being characteristic of it, indicating infection by an organism of high virulence. Within a few hours the surface eruption appears. The spread of this eruption is usually rapid, and its appearance ordinarily leads to early diagnosis. In the patient with typical erysipelas, the skin lesions need not be mistaken. Taken from the point of attack, which as a rule presents some sign of injury or abrasion, the eruption assumes an elevated, shiny, purplish red appearance and is from the first annoying to the patient, in that tenderness, accompanied by burning or at least itching sensations is present.

Perhaps the most characteristic peculiarity is to be found in the distinct borders of the advancing eruption. The line of demarcation is very distinct, the elevated red or purplish-red eruption contrasting sharply against the uninvaded skin. If the attack shows multiple areas, each spreads characteristically to merge later one with another. Not exceptionally the affected surfaces, as a result of the high degree of inflammation, exhibit vesicles or small bullæ containing serum or pus. If these do not appear, there is always enough serous extravasation into the skin and subcutaneous tissues to provoke the tense, elevated lesion. Depending on the degree of virulence of the infecting organism, the resistance of the subject infected, and the early combat which may be waged against the disease, its extension, as manifested cutaneously, reaches its height in from five days to a week. The face — the region most often attacked — may at the height of the trouble be completely involved. The loose tissues about the eyes being extensively infiltrated with serous exudate, the eyes are closed. The lips and ears are excessively swollen, and the whole face shows a dusky, engorged reddened surface. Again the disease may not cover so great an area — only invade one side of the face or confine itself to even a much smaller area. Except in the aggravated cases or, maybe, in such as have been neglected or poorly treated, the erysipelatous eruption does not invade hairy regions.

But erysipelas does not by any means limit itself to the face. Any surface of the body may be its seat. When the disease presents itself on a surface other than the face, it is not at all strange to witness extension in streaks, the lymphatic chains being followed by the infection.

Having reached a point of highest intensity, the process remains stationary for a few days. In subsiding, the inflamed surfaces become less glistening, and a lifeless brown color is apt to ensue. This hue is succeeded by a lighter shade, which progresses to result, after a number of weeks, in the normal. In the meantime vesiculation has ceased, the heat and burning subside, the swelling recedes and desquamation of the affected skin and crusts, formed by the drying of the content of vesicles and blebs, occurs. As a result of the disease there is seldom permanent damage in the nature of scars and pigmentation, though commonly the natural color of the skin may not be regained for many weeks, and there remains for a long period a sensitiveness to extremes of heat and cold or irritants of any kind.

Accompanying the local signs and symptoms are constitutional phenomena varying in intensity according to the degree of absorption and, again, the resistance of a given patient. We have already spoken of the chill and temperature which usher in the disease. Vomiting may be another early symptom. The temperature ascends to a high point — not infrequently reaching 105 degrees or higher, and continuing, with morning decline and evening rise, throughout the active period of the process. The urine is found to be high in color and contains albumin in most instances. The pulse is of course accelerated to a rate corresponding with the temperature. Under the strain, and from toxic causes, the pulse, which at first is bounding, is apt to weaken to an alarming extent. Sudden changes in the temperature and pulse-rate may be regarded as indicating fresh absorption, or as pointing to a new field of infection. In severely poisoned cases delirium exists. The constitutional symptoms may be grave or comparatively mild, for obvious reasons.

With this résumé of the symptoms of erysipelas, as they exist in the average case, and which, as stated, seem to be the typical ones, it is well now to consider the disease as it appears atypically.

It has been shown that the skin areas attacked are limited ones in most cases, but that the infection may distribute itself widely and produce even a generalized erysipelas, is well known, though such cases, always fatal, are rare. The writer has seen one such case, and may reasonably expect never to witness a more deplorable sight. So we may have the malady exhibited over a large area. The statement has been made that erysipelas is ushered in by a chill and elevated temperature, but we also know that there is an afebrile class of cases, which merits our deep concern quite as much as does the case with hyperpyrexia. The heat centers have been differently influenced in the two forms. It is written that erysipelas manifests itself in the skin, yet we must not forget that the mucous membranes and subcutaneous tissues may become rather frequently infected, in the latter instance resulting in cellulitis. Likewise, glandular involvement may be present with abscess formation. The usual case seldom involves the hair-bearing regions, but one must not regard that as an unvarying rule. We have all seen cases with more or less scalp and beard involvement.

There are left to enumerate still more confusing forms. Hutchinson describes cases in which the invaded areas, while swollen and edematous, lack the color — the so-called "white erysipelas." Then we have come to fully recognize a form known as erysipelas migrans, in which the malady tends to relapse in new sites, over a period of weeks. This condition constitutes the "chronic erysipelas" which occasionally tests an attending physician's patience and skill, and occasions errors in diagnosis too

frequently. Again there is a peculiar tendency exhibited in some cases, in that the eruption seems to clear in the older sites as peripheral spread goes on.

It is hardly necessary to more than allude to the extremely mild forms of erysipelas. In these neither local nor constitutional symptoms are of serious annoyance to the patient. Nevertheless, these are frequently difficult of diagnosis, and doubtless pass undiagnosed quite often. The fact that the mild case is a decided menace as an infectious disease, invites against failure to recognize it. Though the slightly infected case may not be in any particular distress or danger, he may, through ignorance or poor advice, hand on his malady to others in whom the disease may develop to an alarming extent. We must therefore recognize erysipelas of all degrees of severity as a serious disease, in which there can be no excuse for indifference in management.

Summing up the matter of symptoms, we have seen that the course of erysipelas is, in most respects, that of any acute infection; that these symptoms, local and constitutional, may be grave or mild dependent on the virulence of the infecting agent and bodily resistance; that, as a rule, each case follows a type, and that no case, however mild, permits of neglect, because of the infectiousness of all cases.

Of the complications apt to occur from infection of certain regions, time forbids a full account. A few may be mentioned, as set down tersely by Pusey, who says: "Complications arising from the spread of the disease from the skin to the other structures are not uncommon. Involvement of the mucous membranes is the commonest complication of this kind. The disease may spread to the mucous membranes of the mouth, nose, pharynx, rectum, or vagina. When involving the fauces, serious destruction of the tissues may occur from ulceration or gangrene, and in the larynx it is likely to produce obstructive edema. When occurring about the genitals in females its spread to the uterus and adnexa produces a very grave complication. On the face and scalp not uncommon complications are meningitis and sinus thrombosis. It may spread into the eyes or ears and produce serious permanent destructive changes. It may extend through the eustachian tube to the middle ear and pass thence through the external auditory canal to the scalp. From the mouth it has extended to the lungs and the esophagus; is said in one case to have traveled entirely through the gastro-intestinal tract."

These words of course deal with unusual complications and sequelæ out of the ordinary, but, as they may follow, the attendant cannot be too diligent.

Passing from this hasty review of symptoms to the etiology of erysipelas, we are confronted by facts which have become clinically established, others resting on statistical support, and a partially established array in a third class, which is the result of the experience and observations of many clinicians. To the last class we cannot give time, interesting though an extensive review of the literature might prove. A consideration of the well-established points only will be touched on.

Stelwagon writes: "The disease is both contagious and infectious, at times to a marked degree, at other times apparently scarcely at all. There are probably three causes operative in erysipelas — essential, contributory and predisposing."

Agreeing with other clinicians and students of pathology, this author accepts as the essential cause, the streptococcus of Fehleisen. The contributory cause is to be set down as any solution of continuity of the skin or mucous membrane, no matter how small, through which infection

may gain entrance. The predisposing causes have to do with, first, the personal condition of the patient — debility due to disease or age, to alcoholism or insufficient nourishment; second, age in itself appears to be a factor, erysipelas seeming most prone to attack persons between the ages of 20 and 50; and, third, season. Anders, who has tabulated over 2,000 cases, distributed over two decades, shows that the late winter and early spring months were ones during which the malady was most prevalent.

To adopt the headings here set down, and to discuss the etiology more in detail, let us return to the bacteriologic phase. The streptococcus of Fehleisen is, as has been said, the organism commonly isolated, and is accepted as the essential cause of most if not all cases of erysipelas. Other investigators, while not denying the part played by this germ, at the same time contend that the Fehleisen streptococcus, if not identical with the *Streptococcus pyogenes,* is of the same strain. A series of cases, studied bacteriologically in Philadelphia some years ago, revealed a special diplococcus. This organism has not received wide recognition. In any event we are warranted in regarding erysipelas as a streptococcic infection, and furthermore to be a disease in which mixed infection may be often proved to exist. The staphylococcus has frequently been isolated, and is thought by some to be capable of producing the disease.

Under the caption Contributory Causes might be cited many actual conditions, and one can well imagine many others. Any agency which produces an infectable surface falls under this division. Therefore it is not at all necessary to attempt to list them. Dermatologists find that the lesions of any skin affection may become erysipelatous. This is particularly true in those skin diseases in which the areas attacked have been long diseased.

We need not add further to the points already made under the heading Predisposing Causes. One author, explaining the showing of Anders, just alluded to, claims that the human race, debilitated by the rigors and confinement of winter, are more susceptible. The claim appears logical. If true, season, *per se,* need not be regarded as an important etiologic factor.

The infectiousness and contagiousness of erysipelas are entitled to a further word. Were it possible, I should like to bring out at length the relative infectiousness and contagiousness of erysipelas, and some of the diseases brought under health board control. With no thought of decrying the efforts directed against the spread of diphtheria, the necessity therefor is no greater than the need for isolation of cases of erysipelas. The mortality in the former, thanks be to antitoxin, is hardly greater than exists in the latter, serious sequelæ are no more apt to follow, yet the contagiousness of erysipelas must be admitted to be greater than that of diphtheria. I cite diphtheria as an instance. Perchance there are others of the communicable class, with the appearance of which, as with diphtheria, a hue and cry is excited far beyond that which should be accorded to erysipelas. It is well that, though legally unrecognized, there exists, among most physicians and in all well-governed institutions for the general care of the sick, unwritten rules of conduct in recognition of this threatening disorder.

In dealing with the bacteriologic side of my subject, the pathology of erysipelas has been entered on. It remains to be shown what tissue changes are brought about through invasion by the bacteria mentioned. The lymph spaces and connective tissue are invaded by streptococci. If there is vesiculation over the diseased

regions, the organism is to be found in the contents of the blebs. Except in those cases resulting in septicemia, and in the very widely distributed forms, the blood-vessels are not invaded by the germ. Miles' studies of the bacteriologic side of erysipelas show that the organism appears differently distributed as follows:

1. In the spreading border just beyond the reddened area (the zone of greatest tenderness) the lymphatics are full of streptococci.

2. Next behind this the tissues present all the evidences of acute inflammation with abundance of leukocytes which have taken up streptococci.

3. Still further back the reaction is subsiding, the leukocytes are being destroyed by the fibroblasts or macrophages, and no free organisms are visible.

4. Finally, when the process has ceased, the products of inflammation have been carried off and the tissues are normal. These findings are quite in keeping with the clinical phenomena exhibited in erysipelas.

Unnas' belief that one attack predisposes to another, a theory which has found great favor, may be explained by the results of the investigations of Besnier, Hutchinson and Allen, who have shown that the tissues attacked by erysipelas may retain some of the streptococci. Hutchinson goes so far as to say that an erysipelatous area never becomes free from streptococci, which under proper provocation may become active. All practitioners have witnessed the tendency in many patients, once victims of erysipelas, to develop it on later occasions, perhaps in milder forms.

The result of the onslaught of these bacteria is, roughly speaking, an acute septic inflammation. Histologically, the venous and lymphatic elements are greatly engorged and filled with sero-fibrinous exudate. The stasis resulting is productive of the characteristic edema of the disease. When hairy regions are invaded, a temporary alopecia may ensue, due to an invasion of hair follicles. In all cases the upper strata of the skin show greatest change; in severe types changes in the corium are to be noted. As a matter of fact, there is not much difference histologically in the erysipelatous area and that to be found in any acute inflammation. From this streptococcic invasion no permanent changes in structure result, except in areas which have been repeatedly or very severely attacked.

In this hurried review an attempt has been made by the writer to be concise, that full time may be given to the phases to be treated in the paper following. The endeavor has been to set forth salient points, and to present these in a manner which will properly introduce, rather than conflict with, the further consideration of erysipelas.

CONSIDER THIS PLEASE

One of our members who comes oftener than some of our Canonsburg and Washington men, writes as follows: "I am sending my dues. It is not my wish to miss any of the meetings of the society but my location makes it impossible to attend in winter. I must leave home at 5:30 a. m., driving 12 miles to the railroad. Coming home I leave the station at 7 p. m., and when I have driven the 12 miles home it takes much of the pleasure out of it."

Those of us who can go in a few minutes in comfort please consider what it means to this man when through neglect or indolence we fail to make the meeting interesting. Meet these men with a glad hand and show them that you appreciate their effort. We happen to know that this particular man does not have the best of health, but he has a great big heart in him to go at all. It takes a mighty small excuse to keep some fellows we know at home on meeting day.—*Medical Program*, Washington Co. (Pa.) Med. Soc.

ERYSIPELAS*

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Detroit

DIAGNOSIS

Our (Dr. R. A. C. Wollenberg's and my own) experience is based largely on the only exclusive service in Detroit for the care of erysipelatous patients, on a continuous service in St. Mary's Hospital, in the Woman's Hospital and Infant's Home and in the Children's Free Hospital. The well-known intimate relationship between the erysipelas organism and that of puerperal fever and the danger of erysipelas contaminating the surgical cases make the service one of grave responsibility. To err either way is serious, sometimes fatal. To place a septic among the erysipelatous patients is often as fatal an error of judgment as to permit a truly erysipelatous to remain an hour too long among susceptible patients. But, as our experience grows, we recognize the inability to be infallible and become more tolerant of error.

The text-books tell us that the diagnosis is easy; but an experience of a quarter of a century does not teach us so. Our chief difficulty, unfortunately a serious one, lies in the differentiation between this "septic" condition and the erysipelatous. A suspected case breaks out suddenly in a ward filled with surgical patients; the erysipelas ward harbors a case or two; a condition which requires a prompt decision.

That erysipelas is due to a streptococcic infection is universally admitted; but so variable is this streptococcic activity and so varied the clinical manifestations, probably more so than those due to any other pathogenic organism, that the specific organism responsible for the erysipelatous activity is most difficult to isolate. That it is of the streptococcic class of which the *Streptococcus pyogenes* is the most common is probable. This difficulty of the laboratory expert to differentiate, a difficulty freely admitted by every laboratory worker whom we have consulted, between the erysipelatous streptococcus and the suppurative and his belief in their probable identity, eliminates his support in our effort at differential diagnosis and places the diagnosis entirely on clinical grounds, fortified only by clinical experience. And this view of the identity of the two, or more probably of the inability of art to differentiate between the two, is shared by many clinicians, whose experience is that, while under ordinary circumstances the clinical appearances are well defined, at other times apparently the same organism may in the one instance produce the true erysipelas and in the other the cellulitis, a strictly comparable inflammation of the cellular tissues. But when the inflammatory process involves both the epidermic and the cellular tissues the condition of cellulocutaneous erysipelas results. The phlegmonous and the gangrenous are but severe examples of cutaneous erysipelas of mixed infection. No uncomplicated erysipelas is attended by suppuration.

When, however, certain clinical symptoms are clearly defined the diagnosis is readily made. A strong emphasis may be placed on the following: an initial

* Read by invitation before the Kent County Medical Society, at Grand Rapids. Feb. 14, 1912.

inflamed area, daily, sometimes hourly, advancing with a sharply defined line of demarcation; with pitting, if any, at the borders; and with but little pain on pressure — in contrast to the diffuse redness of the septic condition; the involvement in the latter of the deeper structures; the pain on deep pressure, and its point or points of fluctuation, if pus be present. In addition, emphasis on the short period of incubation, the acute onset, the angry, red, inflammatory area, the shining surface, the frequent initial chill and the accompanying fever.

The diffusion of the inflammatory process along the lines of the lymphatics, with the occasional swelling of the neighboring glands, easily eliminates the lymphangitis.

Though works on surgery place phlebitis, acute spreading gangrene and acute osteomyelitis also among the diseases to be differentiated, it seems to us that their symptoms are too well defined to need further comment.

It is often written that erythema and eczema resemble erysipelas. But the former has none of the pain and but little of the swelling and is attended with no fever; its location is usually on the trunk and extremities; and it occurs in spots or blotches, fading into the normal skin. The burning skin covered, as it is, with fine scales or vesicles or pustules, the frequently thickened epidermis, the intensely itching surface and the absence of constitutional symptoms sufficiently differentiate the eczema.

That in the mind of the practitioner acute dermatitis is to be differentiated from erysipelas has been shown us recently in a letter received, asking for aid in diagnosis; but the dermatitis lacks the well-defined border, is usually attended with small vesicles, rarely is so limited in its distribution and is never accompanied by a rise in temperature.

Does chronic erysipelas exist? We have always doubted it. A tendency to the recurrence of erysipelas unquestionably exists, and a recurrence of the disease in a patient during an attack is not infrequent; but we have never seen a persistent, chronically inflamed erysipelas. We have heard the term chronic erysipelas given to the severer forms of rosacea; but it is hardly necessary to draw the line of differentiation between two diseases so clinically distinct. Again, we have heard the term confounded with a chronic suppurative inflammation of different parts, as to the end of the nose (due to the chronic folliculitis inside the nostrils); but the absence of the classical signs of erysipelas is too clear for mistake in diagnosis.

A so-called "erysipeloid" is described by authors as an "erythematous inflammation, somewhat resembling erysipelas, observed usually on the hands of persons engaged in handling animal products that are liable to putrefaction and decay, especially fish, shell-fish, meats, poultry and cheese. Hence it is commonly encountered in dealers in fish, game and poultry, butchers and cooks." Similar lesions are found among laboratory workers and medical students, following dissection wounds. Undoubtedly it is a disease due to some pathogenic organism, but the organism is distinct from that causing erysipelas.

TREATMENT

The history of the treatment of erysipelas is the history of empiricism, of antiseptics, of vaccines and of serums. Yet much of that which is based on empiricism in the past, in so far as it has reference to external treatment, is found to-day to have a scientific basis. Though many of the same remedies have been used for years and been regarded as specific for the disease and though the usual short duration of the disease renders the crediting a

beneficial effect to almost any remedy possible, no such specific exists. The most effective are those given to combat existing symptoms. Probably no one medicine represents this continued employment of a remedy based on no scientific fact better than does the tincture of the perchlorid of iron, especially in the advocated doses of 2 to 8 c.c. every two to four hours until convalescence is well established. Such an overdosing with a medicine so injurious to the stomach, even in the asthenic, for whom on theoretical grounds it might be indicated, is hardly justifiable. Even less so, to our mind, is the use of so dangerous a remedy as pilocarpin by hypodermatic administration in doses of 0.01 gm. to 0.015 gm.; and the same may be said in a lesser degree of the use of the sulphate of quinin and of belladonna. So self-limited usually is the disease that the patient will regain his normal condition of health without any internal medication. Yet we would not go to the length of decrying the use of any medicine; we are not medical nihilists.

Of the apparently idiopathic cases many, when they are first seen or brought into the hospital, are in a state of high delirium and great nervous excitement; many are old and prostrated or excitable alcoholics; others have already been under a severe mental or physical strain or have suffered the shock of a surgical operation; some are young, some old and feeble; some emaciated, others heavy, fat, diabetic, or victims of Bright's disease, with constipated bowels, and scanty urine. All probably have a coated tongue, a high bounding or a rapid, feeble pulse, have suffered from a chill or two, and have a high temperature. Such symptoms are to be combated with appropriate remedies. Thus to the one is given a calomel or a calomel-jalap purge, followed by a saline; to the other stimulation; to another aconite or belladonna or strychnin as our experience as physicians would indicate. In the severe cases characterized by a high fever, the bounding pulse and throbbing carotids or by the fierce delirium, aconite or veratrum viride in full doses may be indicated; if the delirium is low and muttering, elaterium. At other times the restless delirium and insomnia may be controlled better with the use of chloral or the bromids or opium; and the fever by proper bathing and sponging. During convalescence appropriate tonics are administered, as the hypophosphites, etc.

VACCINES

It is but natural that a disease due to a definite microorganism should receive the consideration of the vaccine therapeutists and it is not to be wondered at that their experience is so variable, when, as it has already been stated, the isolation of the *Streptococcus erysipelatis* of Fehleisen is so difficult. Probably Dr. George W. Ross of Toronto, more than any other medical man in Ontario, has given greater study to the "consideration of the production of an *artificial* immunity by inoculation with a vaccine," and with his permission we quote freely from a recent letter and from his and Dr. W. J. Johnson's paper (*The Journal of the American Medical Association,* March 6, 1909). After giving their reasons for belief in the efficacy of a specific vaccine in these words:

> **It would thus seem probable that the general symptoms of malaise, pyrexia, acceleration of the heart-beat, and mental apathy or irritability are all due to the absorption of the specific toxin of the streptococcus, while, on the other hand, the local signs and symptoms are consequent on the local multiplication of the microorganisms in the lymph spaces of the skin and the local production of toxins; moreover, that a remedial measure which is capable of inhibiting the reproduction of the streptococcus would be likely to control the clinical manifestations of the disease quickly. These**

authors give the results of the treatment of a series of fifty cases.

Speaking from the standpoint of immunity, they write:

> The opsonic power of the blood is low during the acute process of the disease and whenever more or less rapid spread is manifest; again, the subsidence of such symptoms as mental unrest or apathy, pain and tenderness and the localization of the inflammatory area are closely associated with an increased immunity as evidenced by a rise of opsonic power.

Judging from the standpoint of clinical observation of the course of the disease as apparently influenced by inoculation with their vaccine, they state:

> Whatever surface becomes involved subsequent to inoculation manifests a less severe form of inflammatory process; mental unrest and physical discomfort are rapidly controlled; pyrexia seems to subside more rapidly and long-continued pyrexia has not been encountered; complications and sequelæ seem to be much less common.

In the first sixteen patients treated the opsonic principles of vaccine therapy were carefully observed, but there was "such a uniformly immunizing response and clinical result" that the remaining thirty-four were treated without the opsonic index being taken. Their experience leads them to the belief that a vaccine for each patient is not necessary, except that in the more virulent case the patient's own streptococcus as a vaccine would be more efficacious. Their plan has been to inoculate first with 10,000,000 to 20,000,000 of the devitalized streptococci as the condition is more or less severe, the smaller dose being reserved for the more severe condition. On the second day a repetition of the dose in the more severe cases, if there be signs of improvement, marked by a clearer intellect and a lessened intensity of the local condition. If no improvement has been obtained then only 5,000,000. They claim that they have witnessed an improvement almost invariably on the following day, when 10,000,000 should be given; then 5,000,000, 10,000,000 or 20,000,000 of streptococci every second day until a week after the temperature has reached the normal and the redness has subsided; being guided by conditions, adhering to the general rule, "the more severe the case and the less satisfactory the clinical response, the smaller the dose."

They confirm our experience that the site of inoculation is not important; that it is not necessary that it be near the site of the infection.

In a letter dated Jan. 23, 1912, in response to the inquiry Dr. Ross writes us that in the paper published in *The Journal of the American Medical Association* referred to, he reported some fifty cases which had ben treated by a stock vaccine prepared by heating in the usual way. Since that time he has been preparing his vaccine by sterilization with carbolic acid in the strength of 1 to 200. Living cultures are exposed to this for two or three days and the vaccine is prepared in the usual fashion. So far as he can gather, this is of advantage clinically, and, he believes, certainly it is a more potent vaccine, being twice as powerful as the vaccine prepared by the use of heat. That means instead of 5 or 10 millions, as the case may be, he now gives half the amount. To his original list of fifty cases he has added 150 and writes that this larger experience has absolutely convinced him of the exceedingly great value of an erysipelas vaccine in the control of the disease.

Our own experience with the vaccine (stock) has not been such as to encourage its exclusive use. We have seen no changes which might not have been brought about by other forms of medication or which might not have occurred in the course of so irregular a disease with so many clinical types. And other observers would seem to

bear us out. Thus Weaver and Boughton (*Journal of Infectious Diseases,* Vol. 5, 1908, page 608), summarize their experience as follows:

They state that from their experience in the cases reported they are forced to conclude that the injection of devitalized polyvalent heterologous streptococci during the acute stage of erysipelas is without apparent effect on the course of the disease, the cases doing no better than the controls which received no injections. This, they state, is not surprising to them as in animal experimentation several days are required for immunity to appear following the injection; that by the time such immunity has developed the patient's body may already have developed the immune bodies and gone through the reactions that led to recovery in the natural course of the disease. In three cases of the migrating type in which the course was more prolonged, the injection appeared to have a beneficial influence.

They believe, however, that in the recurrent cases it is not unlikely that several injections with increasing doses would finally stimulate a sufficient degree of immunity to prevent further recurrence in such patients. Especially so were the streptococci isolated from the patient used.

Schorer (*American Journal of the Medical Sciences,* vol. 134, page 728, November, 1907) reports the average duration in twenty-one cases of uncomplicated erysipelas treatment as 6.8 days, in comparison with twenty-nine cases receiving local treatment only, which was found to be 9.4 days. Forty-eight patients treated with antistreptococcic serum showed an average comparable to those treated with the vaccines.

SERUMS

Not so extensively but with no lessened enthusiasm has been the endeavor to produce *passive* immunity by the use of the antistreptococcic serums. The cultures with which the horse is injected are obtained from the exudate of a number of diseases, as erysipelas, tonsillitis, scarlatina, tuberculosis and pseudodiphtheria, etc., and thus is obtained a composite, polyvalent serum.

The administration of the serum is simple: hypodermatically, most frequently between the shoulder blades and in the muscles of the back or buttocks; the usual preparations for an aseptic operation being carefully observed. The initial dose, which should be given as early as possible, varies from 10 to 20 or 40 c.c., according to the extent of the toxemia present. This may be repeated in the full or a lesser dose every eight to twenty-four or thirty-six hours until the symptoms improve. In cases of high temperature the tolerance is better and the larger doses may be administered.

Our experience with the serums has been very limited and as they have been used only in the very severe cases and, unfortunately, at a late hour, the results have not been unusually favorable. We have seen several very marked urticarial rashes follow their use, not only when given for erysipelas but for diphtheria and tonsillitis.

LOCAL TREATMENT

As has already been stated, the medicines used in the local treatment of erysipelas have a scientific basis. This basis is that the "local signs and symptoms are consequent on the local multiplication of the microorganism in the lymph spaces of the skin"; that they are probably due to the presence of one of the organisms of the streptococcic class; and that these organisms are found especially active in the extending area of the erysipelatous inflammation. Thus, almost all medicines used possess more or less antiseptic properties. But whether these antiseptics can pene-

trate into the lymph spaces and destroy the microorganisms is doubtful; so that their application does not probably do more than to prevent mixed infection and to subdue irritation; and the great effects produced are dependent on the inflammatory reaction excited.

The most commonly used of this class to-day is ichthyol in ointment or aqueous solution of 10 per cent. to 50 per cent., either painted on or applied thickly spread on lint or gauze, which should be changed frequently to prevent drying or sticking. Similarly may gauze be applied saturated with a solution of carbolic acid (1 per cent. to 2 per cent.), boric acid (10 per cent. to 20 per cent.), picric acid (1 per cent.), sodium salicylate (1 : 20), resorcin (2 per cent. to 5 per cent.), the bichlorid of mercury (1 : 5,000), or lead and opium wash; or a solution of the sulphate of magnesium; or alcohol (95 per cent.); or simply cold water; the latter a remedy highly recommended by Osler, who credits Hippocrates with its use. Bolder in its application is the use of injections of antiseptic solutions a little beyond the margin of the advancing areas, such as a 2 per cent. solution carbolic acid, a solution of the bichlorid or the biniodid of mercury; and possibly bolder still is the painting of the microorganic inflamed areas with a 95 per cent. solution of carbolic acid, neutralized, of course, in the usual way with alcohol. On the same principle, to meet this extension, an inch-wide band beyond the inflamed areas is painted with the tincture of iodin or a strong solution of the nitrate of silver.

But to our mind the most efficacious and with us the most favorite method of combating the severe cases is by the continuous application of ice to the inflamed area. This method was the favorite of my late honored colleague, Dr. A. E. Carrier, and he based his reasoning on the supposed difficulty of the organism surviving under such a low temperature. The parts are enveloped as thoroughly as possible, and where the extremity is involved, it is placed in a trough of cracked ice for several days.

No consideration of the treatment of erysipelas is complete without reference to the isolation necessary, to the diet, to the temperature of the room, to the nursing, and to the convalescence. In the hospital all patients must be isolated at once. Where possible, a detention ward should be had in addition to the isolation ward, where suspected patients might be placed to await a positive diagnosis. The room should be plain and cool, very well ventilated, with little furniture but with good sunlight, to offset in a measure the depressing effects of its stern simplicity. The bed should be such as to be readily disinfected and the bedding light, but of such warmth as to insure comfort. Isolation should last as long as the process is active and until desquamation is complete. After convalescence all clothing and bedding and furniture should be disinfected and the patient thoroughly bathed with a solution of the bichlorid 1 : 5,000.

The diet should be plain but nutritious, suitable to the needs of an acutely ill or a convalescing patient.

The nursing should embrace all the ideals of the nursing art, and all the details of disinfection; for nowhere is more courage, often more physical force needed to restrain the excitable patient, who must not infrequently be restrained within the jacket. Much rest must be sacrificed to the proper care of the pus-infected eye or ear or to the necessity of frequent dressing, as all the larger vesicles and blebs should be cleansed and often the throat and the nose sprayed from time to time; and in the erysipelas of the

scalp in the woman the care of the hair is an important duty. Courage is needed to nurse under conditions of infectiousness to which no previous attack nor any physical law gives immunity. Again, much patience and tact must be exhibited in an often persistently recurring attack or during convalescence, which, though as a rule complete within two or three weeks, may be prolonged to a month or more.

In the home the hospital ideals should be carried out as far as possible.

Under such circumstances in a large majority of cases recovery takes place rapidly despite the high fever, extensive distribution and delirium. We have had cases with a recurrence of the erysipelas—with a sudden and very severe chill, a high temperature, an anxious expression of countenance. Fortunately, however, though ushered in with such severity, the attack is of shorter duration. We have often seen two and once eight recurrences during apparent convalescence, each of shorter duration than the preceding.

But we have found erysipelas involving the face and scalp in patients of advanced years and in old alcoholics, in whom often meningitis or endocarditis has supervened, uniformly fatal. In the same class of fatality are usually the phlegmonous, the gangrenous, the pyemic and the uremic and those in whom the inflammation has spread to the mucous membrane of the throat. Death may occur from the severe toxemia, from the exhaustion of a protracted case, from invasion into and infection of the deeper structures or from complications in other organs. Of recent we saw in consultation the involvement of the throat with a thick membrane, and subsequently death from endocarditis.

As we are writing this paper, we have had six patients in our ward with facial erysipelas. Two were old, one an alcoholic; these three died. The other three are young men, and although their faces are swollen almost to unrecognition and they are tossing about in delirium, they will probably recover. Surely a disease, absolutely preventable could proper precautions be exercised, commanding such a death-rate and such suffering, should demand our earnest consideration and effort at eradication and amelioration.

57 Fort Street West.

Rest and Recreation should not be forgotten in our practice of personal hygiene. It is well enough for the municipality to furnish parks and breathing spaces, but it again becomes the duty of individuals to use them for the purpose for which they were intended. It has been said, and said truthfully, that many people become insane on deserted farm districts because of the very monotony of their existence. On the other hand, many of the so-called cases of "nervous breakdown" are the result of an over-busy city life. The duty of the individual then is to see to it that he has sufficient rest during each of the 24 hours, and that he has a period of rest, commonly spoken of as a vacation, some time during the year. Sleep should be looked after and an average of about 7 hours out of 24 should be had. Not only should sufficient time be given to sleep but the air in the bed-chamber should be as pure and fresh as possible. Open your windows and keep them open all night long.—*Bulletin Detroit Board of Health.*

NOTE CHANGE OF DATE OF ANNUAL MEETING
TO JULY 10 AND 11, 1912

ECLAMPSIA*

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This disease is described by some authors as a "convulsive seizure, attacking a woman, before, after and during labor." While there are others in whom this may show than in the pregnant woman, I will confine this paper to the latter, simply saying that the convulsions of children, and the epileptic state often assume the leading forms of puerperal eclampsia. The derivation of the word, according to Dunglison: ec, the prefix out or from, from the Greek, and lambano, I seize hold of, appears to me to apply more to the convulsions of children than to those now under consideration. The "absolute abolition of consciousness" is necessary to the true eclamptic state, often very indefinite in length, and as often of short duration. Some cases never regain consciousness, and the disease is one where the prognosis must ever be held in reserve, for cases may at first appear mild and later prove delusive and fatal.

The etiology of this disease is doubtful, but albuminuria being so frequent it has become regarded as the leading factor. One thing is almost certain: the kidneys by their inadequate or diseased action are the leading forces, and whether from the albuminuria, uremia or other elements retained in the blood by defective action, has not yet been fully determined. A few years ago we were taught that urea was the product of the kidneys, and now we know it to be generated by the liver, this former idea perhaps allowing us the privilege of attributing to the kidneys more than was due them. We see in eclampsia a direct action of urea by the somnific state induced and protracted, but who of you whose lot has fallen to the care and treatment of an eclamptic has not noticed with sorrow the great diminution in the quantity of urine itself?

Although there often premonitory symptoms such as impaired vision, dizziness or gastric disturbance sometimes seen and oftener not known, the medical man is often suddenly confronted with one of the most trying conditions that can come under his care. He feels that he must work, and work quickly; the friends in the room are anxious to the point of annoyance. In the tremulous but tonic spasms your chloroform is curatively useless, except to relieve the spasm. Sometimes there is not much spasm, only twitching of the muscles of the face or turning up of the eyes till nothing but the white is shown; consciousness is gone, you cannot tell the friends whether ever to return. You send for other medical aid only to find that as a rule it relieves the minds of those around you. If, fortunately, consciousness does return, it may at any time lapse into its former attitude and you simply watch and work.

You use your catheter and are surprised to find there is almost no urine in the bladder. Sometimes you get a little and, in absence of a test-tube, boil it in a big spoon over a lamp; you see it has become almost solid, or at most but little fluid medium seems to remain. In one I saw

* Read before the Chippewa County Medical Society, Oct. 3, 1911.

on boiling it would not flow from the test-tube when turned downward. Albuminuria you say to yourself is the cause of this condition. Think a moment! What else is there in the urine? — every other usual element of other days, but held together by the excess of that coagulative albumin. Not simply is this latter the cause of the effect over which you are laboring, but the want of urinary fluid to dissolve and carry from the brain the urea that is poisoning and producing the comatose state before you.

Particularly have I been led to believe the liver a causative factor in this disease from my own experience and observation. Some years ago my residence was in one of the lowest and marshiest parts of Michigan — fever and ague, later fevers, bilious dysentery and other conditions peculiar to inaction of the liver. At a mill, the houses of which were located in the marsh itself, cases of this kind were by no means so rare as we expect them to be. I well remember the agonies and death there of one woman after an illness of two days. Another, some time later, in a house almost across the way from her whose time was even less, and whose first symptom of ailment was the so-called fit. There was almost no urine to be obtained and what there was was the worst I have seen, turning almost thick when boiled in a test-tube. Her child lived, and to my knowledge at about 5 years of age was hearty and well.

My last case was about 3 miles from that place, but blue flag and cat tails flourished near the house. Another physician of merit was called at the same time, and after partially succeeding in allaying the spasms we concluded to empty the uterus though the term was not full, perhaps about the seventh month, and were successful in bringing away a living child, and a year ago I was informed that she was a fine girl of 10 years. The mother died on the following day without ever regaining consciousness though the spasms had stopped. I could enumerate others but this is sufficient; in all the urine was diminished to but a little.

These conditions have led me to ever ask women by whom I am engaged to let me know when their urine is markedly diminished, and also to attend to a proper and free action of the liver. You ask what shall we do when we find ourselves face to face with this dread disease? In the first place your nearest sheet anchor is chloroform for the spasms and this may be used freely, in quantity merely sufficient to hold them in abeyance. Pilocarpin I believe is recommended very considerably by some and I think theoretically should be excellent to relieve the system of some of the toxins, and particularly of the urea so productive of the comatose state, but I wish here to give a word of caution to those who are not used to giving it: add to each one-quarter or one-sixth grain a $^1/_{100}$ of nitroglycerin or you may have a flagging heart, and sometimes a very anxious patient; but push and push to effect for the skin may do for you what the kidneys cannot. In late years veratrum viride has been held out as of great value; personally I have had no experience with it, and would hesitate to use the doses some are said to have given. In conclusion I will say I do not think there is any iron-clad rule of treatment in this disease other than to liberate the toxins by diaphoresis and by active catharsis, and hold the spasms in abeyance mostly by chloroform; neither do I know another ailment where the practitioner requires a more thorough knowledge of his materia medica from which to draw without hesitancy, and, I may add, a good pocket case of well-selected remedies.

TREATMENT OF ECLAMPSIA BY VAGINAL CESAREAN SECTION*

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"In the whole range of obstetric practice two diseases have claimed preeminently more victims and brought more sorrow into the human family than all others combined. They are sepsis and eclampsia." It is with these words that Fry has characterized the subject of our discussion, adding, by the way, to a scientific treatise a deeply human note which we as medical men ought never to forget.

Eclampsia is an auto-intoxication having its source in the placenta or fetus and although we must still admit ignorance of its true etiology, we do know that throughout the course of the disease there is more or less profound disturbance of protein metabolism and there is an increase in both the activity of the intracellular ferments and in the coagulability of the blood. Clinical experience has shown that this injurious process tends to increase as pregnancy and labor progress, continuing in some cases even after delivery. Time does not permit of any discussion here of the treatment obtaining in post-partum eclampsia.

As yet we know of no specific therapy. The only question is, as we wait at the bedside of an eclamptic patient, Will she be the gainer by the use of the expectant plan of treatment or by rapid and immediate emptying of the uterus?

Fortunately, it does not fall to the lot of the general practitioner to meet a large number of such cases, hence we must rely on the words of clinicians whose experience is larger and more varied. Let us glance at the following statistics:

Liepman reports from the clinics of Wurzburg, Basel, Halle and Berlin a mortality of 25 or 30 per cent. under the expectant treatment and 2.8 or even 1.8 per cent. after immediate delivery; Zwiefel reports a mortality of 28.5 per cent. under expectant and 11.25 per cent. under immediate delivery; again, Bumm reports a mortality of 30 per cent. with the expectant treatment which was reduced to 2.3 per cent. by immediate delivery; Ferri of Milan has reported a series of cases treated by rapid and immediate delivery in which the mortality was 7 per cent.; Fry had one death in fifteen cases treated by rapid delivery. These figures seem sufficient to convince any one of the superiority of immediate delivery over the expectant medical plan of treatment. Since, then, we are dealing with a condition in which every moment of delay means an increase of poison and hence of danger, it stands to reason that we should not waste valuable time by eliminative treatment while the source of supply of the poison continues. We should not wait for a second convulsion since our patient is at best in no very good condition for an operation and each seizure but increases the severity of the disease. So it becomes necessary for us to seek that operation by which the uterus may be emptied with the minimum amount of shock to the mother and damage to the maternal tissues.

* Read before the Kalamazoo Academy of Medicine, September, 1911.

Manual dilatation of the cervix is probably the most popular and widely used method. When the cervix is soft and yielding so that one or more fingers can be admitted easily, the Harris method does very well. This is usually very successful with multiparæ but not at all so in old primiparæ with rigid cervices or, in fact, in any case where this latter condition prevails. As a rule the Harris method is not well understood and instead of using the snapping motion, after introducing the thumb and finger, the practitioner usually employs a boring motion, exerting pressure upward with the fingers in the shape of a cone. This latter method not only opposes the natural process of dilatation but is most fatiguing even to one with much practice and muscle. In the hands of an expert manual dilatation requires from one to two or three hours; the fingers become numb from pressure and it is necessary to change hands frequently. This, of course, exposes the patient to added danger from below. If too much force is applied, there is danger of tearing or bruising the soft parts. Obviously, a cutting operation is to be chosen as against this in rigid cervices.

Despite the good reports from Bossi and many of his supporters regarding the use of steel dilators, of which the Bossi dilator may be taken as a type, it has been shown by Bardeleben that severe lacerations result in a large proportion of women delivered by this method. Duehrssen repudiates this method entirely. At the last International Congress of Medicine Gauss reported seventy-five cases of eclampsia treated by the Bossi method and his conclusions are that this method should not be employed early in pregnancy when the soft parts are rigid and, therefore, it is not indicated where the soft parts are relaxed, in which event manual dilatation is to be preferred. At the same congress Winter stated that the Bossi method could not be used without resulting lacerations unless the cervical canal was obliterated and the external os as big as a shilling. One can never estimate the amount of pressure being applied to the soft tissues when he is using a steel dilator and, therefore, he is not aware of the beginning of a tear.

Cervical incisions, which were used largely by Duehrssen, for the first in 1890, have not become popular in this country, mainly on account of the danger from hemorrhage and the extension of the incision by tearing, as the head advances through the parturient canal. Moreover, the indications for cervical incisions are limited to instances where, as above, the cervical canal is obliterated and the external os is rigid.

The classical cesarean section has clearly defined limitations in the field of eclampsia. In this condition, as well as in cases not complicated by eclampsia, abdominal cesarean section is indicated wherever the pelvis is contracted or in the presence of irreducible tumors of the soft parts or pelvic bones, or of atresia of the vagina or cervix from scar tissue.

In consideration of the first mentioned indication, that is, contracted pelves, the following statistics have been gathered: The frequency of pelvic contraction in American-born women is estimated at 2 per cent., in foreign-born at 6 per cent. According to Winckle the contractions are sufficiently marked to cause symptoms in but 5 per cent. of cases. Edgar has found contracted pelves in 3.66 per cent. of cases, Williams in 13.1 per cent., Crossen in 7 per cent., Reynolds in 1.13 per cent., Flint (from 10,223 cases), 1.42 per cent., Barnes (London, 38,065 cases), 0.57 per cent.; over Europe the percentage ranges from 0.9 per cent. to 18.3 per cent. The frequency of eclampsia is estimated at

from 0.3 to 3 per cent. of pregnant women. In the absence of any statistics bearing directly on the question it is no more than fair to conclude that the indications for performing abdominal section must necessarily be very infrequent inasmuch as eclampsia combined with contracted pelves cannot occur more than 0.3 to 3 per cent. of, at the most, 18.3 per cent. of all women.

Irreducible tumors of the soft parts are an infrequent complication, especially when we consider only the 0.3 to 3 per cent. of all pregnancies in which they may occur. Hirst has analyzed 13,000 cases of fractures in which 0.8 of 1 per cent. were fractures of the pelvis, thereby reducing the frequency of exostoses and malformation of pelvic bones from this cause to a minimum.

The last indication, atresia of the cervix and vagina, is also a very rare condition complicating eclampsia. Neugebauer has reported about 1,000 and Maher about 200 cases from the literature dealing with pregnancy. It is possible that there is an overlapping of some of these cases and it is not stated whether any of them were complicated by eclampsia.

In 1895 Duehrssen described a new operation, "anterior vaginal hysterotomy." In an address given by him in May, 1906, in this country, he sums up the indications for the operation as follows: "Vaginal cesarean section is indicated when in the case of an imperfectly dilated cervix, which will not permit of dilatation by gentler means, the life of the mother or child is brought into danger." And among the special indications which he mentions eclampsia ranks first.

Although this operation will never entirely supersede manual dilatation in those cases in which the cervix is easily dilatable, yet it seems to be the ideal operation for rapidly evacuating the uterus in eclampsia. Ideal for the following reasons:

First, the operation is comparatively simple and can be done with one assistant. To be sure, it is better to have two but this is not absolutely necessary. (It is understood, of course, that with this operation, the same as with any other, no one should attempt it who does not understand the technic.) Second, the operation and delivery of the child can be done in approximately the same length of time as the abdominal section, varying, of course, with the dexterity of the surgeon and the surrounding conditions, from five to fifteen minutes. Third, the operation may be done with as strict asepsis as any of the vaginal operations and, in fact, with more than many. Duehrssen himself claims it can be done as aseptically as the classical cesarean. Infection is much less likely to occur in a clean-cut incision closely coaptated than where the tissues have been more or less bruised and torn and the resulting ragged edges left without repair. Even though infection may occur in a small percentage of cases, we still have an ideal drainage and the comforting assurance that "we have not invaded the peritoneal cavity." No matter how carefully the examination of an eclamptic patient may be made, there is always danger of introducing infection from the outside and in abdominal section we face the added danger that this may be carried on to the peritoneal cavity at the time of delivery. Fourth, there need necessarily be no more hemorrhage from vaginal section than from abdominal. However, if the hemorrhage is not too severe it merely assists our patient to a still better condition by lowering the blood-pressure. Fifth, a thorough acquaintance with the technic of the operation obviates injuries to the bladder and danger of extension of the incision into the peritoneal cavity. Sixth, the claim

that there is liability of rupture to the uterus during subsequent labors has not been supported by the records. Seventh, the shock from an abdominal section is greater than that resulting from a vaginal operation.

A brief description of the operation might well be given here: After a thorough dilatation of the vagina, the anterior lip of the cervix is seized with a Jacob's volsellum forceps and brought into view at the vulva. A transverse incision long enough to encircle nearly half of the cervix is then made through the mucosa near the fornix. It may be necessary in some cases, in order to secure more room, to make a second incision of the mucosa in the median line, the cut extending forward at right angles to the first. The bladder is then separated from the uterus by blunt dissection and is pushed up out of the way with a sponge or retractor. A Jacob's volsellum forceps is then placed on either side of the median line and the cervix incised as far as necessary, care being taken to make the incision directly in the median line, thus avoiding hemorrhage. If the membranes have not already ruptured they can now be seen protruding through the opening. It is usually advisable, although not always necessary, to incise the posterior lip in a similar manner to the anterior. In case the head is fixed, the child should be delivered by forceps. If the head is still in the floating position, version is preferable. After delivery, the placenta is easily expressed by Credé's method; the posterior lip is sutured first with continuous stitches that extend only to the mucosa. When the anterior lip is sutured the vaginal mucosa is brought down and united to the cervical. For the operation itself, the patient needs no special after-treatment differing from the ordinary obstetric case. Douches are not necessary unless suppuration occurs. The operation once over, medical treatment should be undertaken where needed in order to eliminate the poison more completely.

From 1878, when abdominal cesarean section was first used for eclampsia, until the present time, the mortality of the operation has been high. In 1904 Hammerschlag collected a series of cases of abdominal cesarean section for eclampsia with a mortality of 55 per cent. Twelve per cent. of the patients died of sepsis. Although in clinics the classical cesarean section has been done very successfully, with a mortality as low as 3 to 5 per cent., this does not represent the true state of affairs; Doederlein has found that from a collection of cases from countries in which the reporting of them is compulsory, the mortality from the classical cesarean rises to from 25 to 35 per cent. Compare this with the series of vaginal cesarean section collected by Duehrssen in which the mortality was only 12.7 per cent. Veit had only one death in thirty-three cases; Bumm lost one patient out of forty operated on by vaginal cesarean section.

The classical cesarean seems to offer a somewhat better opportunity for the child than does vaginal cesarean since Friedemann reports a mortality of 36.5 per cent. after the former compared with 56.4 per cent. mortality after the latter. These figures, however, mean very little unless we know at what period of gestation the operation was performed. Providing the operation is done after the period of viability of the child we may say, in general, the quicker it is done after the first convulsion the lower will be the fetal mortality.

We may then conclude from the foregoing:

1. Eclampsia is an auto-intoxication that occurs only during pregnancy, due to

disturbed metabolism, the exact nature of which we do not know.

2. Cessation of pregnancy improves or eliminates the eclamptic condition.

3. The mortality, both maternal and fetal, is lowered by the immediate cessation of pregnancy, therefore an operation to accomplish this should be performed at once.

4. That operation should be employed which involves the least shock to the mother and damage to the maternal tissues. Of course, we aim and hope to save both mother and child but our first and chief thought must always be for the mother and so,

5. While abdominal cesarean section is indicated in cases presenting contracted pelves or in cases where delivery through the birth canal is made otherwise impossible, vaginal cesarean section is the method of choice for rapid evacuation of the uterus in eclampsia.

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NOTE CHANGE OF DATE OF ANNUAL MEETING
TO JULY 10 AND 11, 1912

ECTOPIC GESTATION*

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Ectopic gestation is not a new affliction, although its recognition is new. Thirty-one years ago, when I was a medical student, not a word was said about it, and in the obstetric and gynecologic text-books of that day it was not mentioned. Pelvic hematocele was discussed; but no one then dreamed that pelvic hematocele was caused by the rupture of a gravid tube. Thomas was a favorite author in those days. He says in his "Diseases of Women," 1874: "The special sources of the hemorrhage inducing the affection . . . may thus be presented at a glance: (1) rupture of blood-vessels in the pelvis; (2) rupture of pelvic viscera; (3) reflex of blood from the uterus; (4) transudation from blood-vessels." He says: "At times the affection is indicative of a serious internal lesion, rupture of the ovary or tube," but he wholly missed the explanation. The "American System of Obstetrics," by Hirst, in 1888, does not treat of this condition although its companion work, the "American System of Gynecology" by Mann, in the same year, does treat of it. Kelley's monumental work on "Operative Gynecology," 1898, does treat of it. Also Hirst's "Text-Book of Diseases of Women," 1903, and William's "Obstetrics," 1903. So you see how recently this subject has got into the books. In the construction of this paper I have drawn liberally from these works, and from the later works of Montgomery and Ashton, as well as from my own experience.

* Read at the December, 1911, meeting of the Gratiot County Medical Society.

Tait, in 1883, performed the first laparotomy for the purpose of checking hemorrhage from a ruptured tubal pregnancy. After he had demonstrated the ease with which the procedure could be performed and the surprisingly good results obtained thereby, the operation came into general use.—Williams.

Veit was the first one to make a diagnosis of unruptured tubal pregnancy, in 1883, and Janvrin was the first one in this country, in 1886. My first operation for ruptured tubal pregnancy was done Dec. 13, 1901, for Dr. Bagley.

That conception normally takes place in the fallopian tube is no longer doubted. The spermatozoon swims upstream, against the action of the ciliated endothelium of the tube, until it meets the descending ovum. Then, by a chemotactic force existing between them, the spermatozoon enters the ovum, and the head dissolving therein restores to the ovum the potentiality of evolution which it had before the extrusion of the polar globules.

It takes the egg one week, ordinarily, to traverse the tube; but if hindered in its descent, it may never get into the uterus. Then occurs a tubal gestation. These hindrances are mechanical. Chronic inflammation of the tubal endothelium, with consequent swelling and narrowing of the lumen, may make it impossible for the egg to get down; or a stenosis of the internal ostium may do it; or the pinching of the tube by adhesions. The egg may be overly large, and early fertilized, and its descent delayed until it has acquired so great a size that it cannot pass the ostium internum. This event

occurring, there follows a train of most disastrous consequences, once in every 500 pregnancies.

Extra-uterine pregnancies may be classified as tubal, tubo-ovarian, ovarian and abdominal. Abdominal pregnancies are always secondary to other varieties. "It is impossible for an abdominal pregnancy to occur primarily, even admitting that the ovum may become fertilized in the peritoneal cavity, for the reason that the product of conception would at once be destroyed and absorbed by the peritoneum."—Ashton. Ovarian pregnancies are admitted to be possible, but they are very rare. My third case, operated on April 6, 1903, was of this variety. At that time most writers denied the existence of this variety. The tubo-ovarian variety arises when the fimbria is adherent to the ovary, and the fertilized ovum attaches itself very near the fimbria. Then in its development the ovary forms part of the cyst wall. In the tubal variety the ovum may attach in that part of the tube lying within the uterine wall, and is then called interstitial, or it may attach itself in the ampulla or in the isthmus. It is usually found in the ampulla.

From this time onward I shall confine my discussion to tubal pregnancy, and without regard to what part of the tube is involved.

Now, given a case of tubal pregnancy, let us trace its course. The tube becomes slightly hypertrophied, much more vascular, and the endothelium makes an effort to develop a decidua, only slightly successful, however. The uterus enlarges, but less than it would in a normal gestation. It forms a decidua vera. In about half of the cases menstruation ceases, and in the other half it does not. The other symptoms of early pregnancy usually follow. The pregnancy may terminate in a rupture of the tube, in a tubal abortion, in the death of the embryo before the rupture of the tube, or the fetus may continue to live to full term.

The most frequent termination is in the rupture of the tube. This usually occurs between the eighth and twelfth weeks. The growth of the chorionic villi into the wall of the tube weakens it and causes it to rupture at an earlier time than it otherwise would. Lifting, a fall, a blow, straining at stool, copulation, digital examination, etc., may be sufficient cause to precipitate this result. Often no other cause can be ascribed than the distention of the tube, because rupture often occurs when the woman is sleeping quietly in bed. Rupture may take place upward into the peritoneum, downward between the folds of the broad ligament, or into the uterus if the pregnancy be interstitial. The outer third of the tube of Fallopius has no mesosalpinx. Hence rupture through any part of that would be intraperitoneal. Much the most frequent direction of ruption is into the peritoneal cavity. This "is usually followed by death within a few hours unless the bleeding vessels are controlled by an immediate laparotomy."—Ashton. But this does not always happen because the rending of the tube may be gradual, and the hemorrhage moderate, or slight, even, if the embryo and membranes plug up the rent. In such cases the patient revives and bleeds again and again. The fetus usually dies at the time of the first hemorrhage; but it may continue to live in the peritoneal cavity if its attachments within the tube hold. My second case, operated on March 6, 1903, illustrates this fact well. This case was sent to me a hundred miles on a bed. The rupture had taken place five weeks before. No diagnosis had been made. On opening the belly sufficiently to introduce a part of the hand, and loosening the adhesions, out jumped a 4-months fetus, like a "Jack-

in-the-box," alive and kicking. But if the anchorage within the tube be broken up the embryo must die. No placental attachments are ever found on the peritoneum. Hirst dissents from this view.

If the rupture be between the folds of the broad ligament, the hemorrhage will sooner be suppressed because of its confinement within close quarters. The pain, however, is great. If the fetus lives and continues to grow, it will lift up the broad ligament and push aside the pelvic viscera. If the broad ligament bursts under this great strain, the fetus may slip through the rent, and thus become intraperitoneal, while the placenta is extraperitoneal. "As a rule, full term ectopic fetuses are extraperitoneal."—Ashton.

In interstitial pregnancies the fetus may be gradually extruded into the uterus, and if the placental attachment within the tube be not broken up, the gestation may go on to full term. This is a fearful condition, the placenta being up in the tube and the baby born at full term. I have never seen such a case; but should such a case fall into my hands I would, with sterile hand, explore the interior of the uterus; and, finding no placenta there and the funis going up into the tube, I would advise on immediate celiotomy to get that placenta.

By tubal abortion is meant the discharge of the embryo through the abdominal ostium of the tube into the peritoneal space. This termination of the case must take place before the eighth week, because the ostium closes at that time. The hemorrhage in these cases is a variable quantity — sometimes trifling, and sometimes speedily fatal. The fetus always dies in a tubal abortion and if the mother does not die, the fetus will be absorbed.

Sometimes the embryo dies from a hemorrhage into its own membranes. This clot organizes and forms a tubal mole.

It is said that in 6 per cent. of the cases of extra-uterine pregnancies the fetus lives to the end of the term. Unavailing labor then comes on, and the fetus soon dies. This leaves a dead baby within the woman to be disposed of in some way. By the deposit of lime in and about this baby it is converted into a lithopedion; it may be converted into a fat and soapy mass called adipocere; or it may mummify. If this dead fetus escapes infection from the bowel it may be carried indefinitely, but if infection takes place abscess formation will follow. This may break into the vagina, the bowel or the bladder. When I was a half-grown boy I overheard my mother and some other women telling about another neighbor woman who had been passing baby's bones per vaginam for many years. It was a marvel to them and wholly unintelligible to me at that time.

CLINICAL HISTORY

The clinical history of tubal gestation is romantic, and as interesting as a novel. Before the rupture of the tube, the woman usually comes to believe herself pregnant. She is likely to have the mild and indecisive symptoms of early pregnancy, such as a slight feeling of heaviness of the uterus, a feeling of fulness and a hardness of the mammæ after the fourth week, and morning sickness after the sixth week. In about half of the cases menstruation ceases, and in the other half it continues with various modifications. Sometimes the woman misses a period or two, and then bleeds so profusely that she believes she has aborted. The pain suffered often confirms this belief. If the woman or the doctor has inspected the cloths, pieces of decidua may be found, and sometimes a complete uterine cast. Sometimes she drizzles along all of the time. If the case continues to the end of the third month, pigmentation of the

areolæ and of the vulva will be apparent, and the usual deepening of the color of the vagina. Digital examination reveals an enlarged uterus, but not so much enlarged as it would be in a uterine gestation. An enlarged and tender tube will be found. This is a valuable sign. It will be found at a lower level than its normal position because of its own weight; and a falling tube or ovary rotates toward the midline because it is hinged at the horn. The mass will, therefore, be low and near the uterus — often almost behind it. These signs and symptoms are sufficiently distinctive, so that one can make a diagnosis even before rupture as in my fifth case, Feb. 1, 1906. But all of these examinations must be made gently for fear of rupturing the tube.

At about the end of the second month the catastrophe usually comes. At this time the tube bursts and the symptoms of tubal rupture suddenly appear, without any premonitory warning. In some cases, however, the patient may complain for a few days previously of colicky pains and slight pelvic pressure symptoms. The rupture may occur when the patient is in bed or when she is around attending to her daily duties, and in some cases it may follow some unusual or severe form of exertion. In extremely rare cases a rupture or an abortion may occur without producing marked symptoms, and the patient may not be aware of her serious condition.

The patient is suddenly seized with severe pain which is quickly followed by collapse. The pain is felt over the lower abdomen and in the affected side of the pelvis. It is acute, agonizing, excruciating in character, and at times so severe that the patient becomes unconscious at once. Symptoms of shock and collapse rapidly follow the occurrence of pain; the pulse becomes weak and very rapid, or absent altogether; the temperature is subnormal; the respirations are sighing and shallow; the skin is anemic and has a deadly pallor; the eyes are glassy and the pupils dilated; the extremities are cold; the surface of the body is bathed in a clammy perspiration; the face has an anxious, pinched expression; and there is twitching of the facial muscles. Nausea and vomiting are common symptoms, and it is not unusual for delirium and convulsions to occur. If the patient is not unconscious, she may complain of impared vision and of a singing sound in the ears.

The character and severity of the symptoms depend on the situation of the rupture, and the size of the hemorrhage. The symptoms of a tubal abortion resemble those of a tubal rupture, but usually they are less marked and the hemorrhage is not so severe. When the tube ruptures into the peritoneal cavity the hemorrhage is usually profuse and continuous, and the patient generally dies withn a few hours unless she is saved by surgical interference. Occasionally, however, the bleeding stops spontaneously, reaction sets in, and the patient either recovers or dies later from a fresh hemorrhage. When the tube ruptures between the folds of the broad ligament, death seldom results from hemorrhage, as the blood is poured out into a confined space, and hence the bleeding is quickly controlled. The tearing apart of the structure of the broad ligament by the blood causes intense suffering, and if the distention is sufficiently great severe pressure symptoms develop.—Ashton.

After rupture a digital examination will disclose excessive tenderness in one or the other side of the pelvis, and a soft fluctuant, or a doughy mass in Douglas' culdesac, or down in the folds of the broad ligament.

If the case gets along into the second half of term we shall find that the fetal heart-sounds are more easily heard, and the mother will feel the fetal movements more plainly because the fetus is nearer the surface. Menstruation may be present or absent; and sometimes there will be a discharge of decidual débris throughout the whole term. The shape of the abdomen will be asymmetric. False labor pains will come on at the end of term, and the fetus will soon die.

In the majority of cases the fetus is poorly nourished, ill developed, undersized and often

deformed, although at times it may be physically perfect and apparently healthy. Hydrocephalus, spina bifida, club-foot and visceral displacements are common. If the pregnancy goes to term the child usually dies at the time of its removal, and even if it survives the operation, death usually occurs within a few days or weeks.—Ashton.

The diagnosis will be made from the subjective and objective symptoms as related above. The history will usually show that the woman has been sterile for some years — sometimes for many years.

TREATMENT

As soon as an unruptured extra-uterine pregnancy is positively diagnosed, its immediate removal by laparotomy is urgently indicated, since rupture may occur at any time, and the patient die from hemorrhage before operative aid can be obtained. The importance of immediate operation cannot be too strongly emphasized, and all methods of treatment which aim at destroying the fetus and thus terminating pregnancy without operation are absolutely unjustifiable. This applies not only to the use of electricity but also to the injections of various poisonous substances into the gestation sac. Even when such procedures are successful, the danger to the mother is by no means at an end, since rupture sometimes takes place after the death of the fetus, and even if this accident does not occur, the retention of the products of conception renders the tube a useless organ.—Williams.

Ashton says:

The treatment of ectopic gestation is operative under all circumstances and conditions, and our sole object in view must always be the safety of the mother, as the child has no claim whatever to be considered even in those very rare cases in which gestation continues until viability is reached. The dangers, under these conditions, through which the patient must necessarily pass overwhelm absolutely any argument that may be advanced in favor of the life of the fetus, which . . . is worth but little on account of its low vitality and defective development, as well as the practical certainty of its death early in infancy.

From this view Montgomery dissents in this language:

Experience . . . has disclosed that the extra-uterine fetus may be well-developed, and when it is evident that the mother can be saved only by operative procedure, it seems cowardice that this should not be employed at such a stage as will give the other being an opportunity for continued existence.

At the time of rupture or abortion the indication is to operate in every case without unnecessary delay, whether the tube has ruptured into the peritoneal cavity or between the folds of the broad ligament. We must not wait for reaction from collapse or shock to set in before operating, as the patient may perish in the meantime from loss of blood. I am well aware of the advantages to be gained by not operating during collapse if it can be avoided, but we must remember that the case is one of internal hemorrhage, and hence the dangers of delay offset all other considerations; besides, it is unwise to stimulate the patient by saline injections and other means until everything is ready to open the abdomen, for the reason that under these circumstances the hemorrhage is likely to start again with renewed vigor and force.—Ashton.

Prior to the end of the fourth month the entire sac may usually be extirpated without causing uncontrollable hemorrhage, and consequently the placental circulation, in cases in which the fetus is living, does not materially complicate the operation; but after the fourth month of gestation the operative technic depends on whether the fetus is living or dead. While the fetus is alive it is almost impossible to remove the placenta without causing uncontrollable hemorrhage. . . . When, however, the fetus dies, the placental circulation gradually becomes obliterated by the formation of thrombi, and at the end of one or two weeks the vessels are completely obliterated. . . . In three or four weeks from this time the thrombi become thoroughly organized, and consequently there is but little, if any, danger of hemorrhage when the placenta is separated from its attachments at the time of operation. —Ashton.

But "the many dangers incident to the continuation of an abdominal gestation make it unadvisable to wait until the fetus dies at term and the placental circulation becomes obliterated."—Ashton. Hence, operate during the life of the child, open

up the sac, clean it out, stuff it with gauze, put in a large drainage tube, and stitch the edges of the sac to the skin, leaving the placenta to disintegrate and slough away.

A freshly ruptured tubal pregnancy should not be attacked through the vagina, for the reason that the procedure is often more difficult than a laparotomy, and affords but a limited view of the field of operation, while there is always a possibility that it cannot be completed by the vaginal route, and that an eventual resort to laparotomy will become necessary.—Williams.

In concluding, allow me to refer to by own cases. I have done twelve operations for ectopic gestation. My first was done Dec. 13, 1901, for Dr. Bagley. My second was done March 6, 1903, for myself. My third was done April 6, 1903, for Dr. King of Shepard. My fourth was done Dec. 25, 1905, for Dr. Gardner. My fifth was done Feb. 1, 1906, for Dr. Gardner. My sixth was done Feb. 24, 1906, for Dr. Sayers of Shepard. My seventh was done Dec. 26, 1906, for Dr. Weller. My eighth was done Aug. 6, 1907, for Dr. Gardner. My ninth was done March 26, 1911, for Dr. Hubbard of Vestaburg. My tenth was done Sept. 30, 1911, for Dr. Graham. My eleventh was done Oct. 25, 1911, for Dr. Lamb. My twelfth was done Nov. 17, 1911, for Dr. Hubbard. My first, fourth, seventh and tenth were fearfully bloody. From these I have learned that the peritoneum will take care of much aseptic blood. Its absorption will always produce some pyrexia from the thermogenic substance in it. My second case demonstrated that the fetus may continue to live after the rupture of the tube, if the placental attachment be not disturbed. My third case proved to my mind that an ovarian gestation is possible by the egg being fertilized while yet in the graafian follicle. This experience came at a time when ovarian gestation was generally denied. My fifth case was diagnosed before rupture. My sixth case had just returned from a visit in the south part of the state. Her friends knew not of her return. The train took her to Shepard. From here she got a ride of 6 or 8 miles toward home. From this place she walked about 3 miles further to her home. In that same night her tube burst. My eighth case had ruptured before I saw it. We brought her in. A further hemorrhage occurred on the road, but she survived. My ninth case was a bilateral tubal pregnancy, and both tubes ruptured. This was a rare case. I can find no parallel case. Multiple tubal pregnancies have been recorded, but not just like this bilateral, and both ruptured. Williams says: "In rare instances twin pregnancy has been observed, the embryos being sometimes found in the same tube, while in other cases there was a fetus in each tube, both showing the same development. Sanger and Kruser have reported cases of triplet tubal pregnancy." My eleventh case came from Detroit. Her tube had ruptured sixteen days before operation, and she had general peritonitis, and died the next day. This is the only death in my list. My twelfth case had nothing unusual about it. Eleven of these cases were tubal, all ampullar to the best of my present knowledge and belief, and all had ruptured into the peritoneal space.

NOTE CHANGE OF DATE OF ANNUAL MEETING
TO JULY 10 AND 11, 1912

The Journal of the Michigan State Medical Society

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MAY

EDITORIAL

CHANGE OF DATE OF ANNUAL MEETING

Owing to local conditions in Muskegon (the opening of summer hotels and conflicting dates), it has been necessary to change the date of the annual meeting of the Michigan State Medical Society to July 10 and 11, 1912. At this later date the weather will probably be more settled and more pleasant and there will be absolutely no question about accommodations, for the summer hotels will be open and can accommodate over 1,000 guests.

Elaborate plans are being made for the entertainment of the Society and all should make especial effort to be present. In this number will be found the preliminary program. The final and official program will appear later. Many valuable papers are promised and the scientific program will compare favorably with any the Society has ever had.

THE JOURNAL A FORUM

In March an editorial of vital importance to every physician in Michigan appeared in *The Journal of the American Medical Association:* "What's the Matter with Michigan?" We copied this editorial on page 258 of our April number and sent letters to a number of physicians throughout the state asking for comments. We would be pleased to print the views of any of our members on this subject.

We wish our members to feel free to discuss any subject of interest to the profession through our pages, the only restrictions being that discussions be not too long, that they be by members of the Society, and that they be signed. We feel that THE JOURNAL will be serving its best purpose in thus furnishing a forum for general discussions by our members.

A NEW FEDERATION OF STATE MEDICAL LICENSING BOARDS

A number of years ago a wave of medical reorganization and medical legislation swept over the country. In 1899 Michigan adopted a medical practice law which, with various amendments, is in force to-day. At that time Michigan established a state board of registration in medicine. Other states have established such boards. For a short time each board worked independently but soon the advantages of conference and organization was appreciated and two federations of examining and licensing boards were organized thus duplicating the work of each other

and dividing the strength and influence which would naturally be the result of one strong federation. At the time of the eighth annual conference of the American Medical Association on medical education, medical legislation and public health, the American and National federations of state medical licensing boards combined and adopted a new constitution and by-laws. The advantages of federating these two boards are apparent.

ETHICS

V. HANG TOGETHER

Recently the editor of the *Delaware State Medical Journal* has made a survey of the financial condition of the medical profession of his state. The editor of *The Journal of the South Carolina Medical Association* is now engaged in a similar study. These studies show a low average income of physicians. They show an enormous amount of work for low fees with a large percentage of uncollected and uncollectable accounts (33 per cent. in Delaware.

This condition of low rate of compensation is one chargeable largely to the profession itself. It should be a matter of the moral and ethical life of a physician never to underbid another, but to so regulate his fees and his practice that whoever in the future treats one of his patients may readily charge and receive a fair compensation. The members of the bar do this.

The medical profession get together in their cities and county districts and establish fee bills to which all subscribe. Do they all charge at least the minimum rate of these fee bills? Last month we referred to the low rate of compensation of medical men engaged in certain classes of lodge and contract practice. At Jackson in 1906 at the meeting of the Michigan State Medical Society resolutions[1] were adopted by the society to the effect that the minimum fee for life insurance examinations should be $5.

To determine what is being paid for insurance examinations in Michigan the editor addressed a communication to each insurance company[2] listed in the report of the insurance commissioner for 1911, asking what rate they pay their medical examiners. Twenty-three companies which are listed in another column[3] pay the flat $5 rate, out of sixty-two doing business in Michigan.

Life insurance companies maintain a bureau to which each company may go when looking for information regarding either risks or medical examiners. The medical examiner who signs his name to an application stakes his reputation that the findings as reported are true, and that the applicant will probably live out his expectancy. This application is placed on file and remains there as the recommendation of the physician during the life of the policy. The examination required is not alone to determine the present condition of the applicant, but to determine his probable expectancy of life.

Of all the insurance companies which did business in Michigan in 1910, less than one-tenth the amount paid for commissions to agents was paid for medical examination fees, inspection of risks, and all other expenses chargeable to that department of the company. Is this a sufficient compensation to the medical profession, on whose trained judgment the very lives of these companies depend?

It would be possible to secure the flat $5 rate from all companies in Michigan if the medical profession would stand together the way they have done in other states. In Kentucky and Tennessee especial interest has been kept up until at

1. JOURNAL M. S. M. S., August, 1906; also editorial, February, 1911.

2. Except where the editor personally knew the rate.

3. See page 321.

present very few companies are doing business in either of these states which do not pay the $5 rate. Some companies, we are informed, are paying $5 in these states and paying $3 in other states. We are also informed that the state agent of a certain life insurance company with headquarters in the East found it necessary a few years ago to himself pay $2 to the examiners in one of our great western states because he could not find competent men who would make the examinations for the $3 paid by the company.

Cannot Michigan do the same as Kentucky and other states?

THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council on Pharmacy and Chemistry of the American Medical Association is composed of scientists who are giving freely of their time and energy for the betterment of the practice of medicine. They are honestly endeavoring to give us a true and impartial view of the ethical stand of the countless proprietary preparations offered for our therapeutic use.

Scarcely a month passes but the Council is vigorously arraigned by some of the so-called "independent" journals. Some have one criticism, and some have another; either the rules are too stringent, too arbitrary, good preparations are kept out unjustly, or some other fault is found; but the burden of all seems to be that "the individual physician should be the judge of what specialties are worthy of his use." The responsibility of the editor (who has especial advantages in determining the merits of these preparations) ceases when he has secured the ad and placed it before his readers — without vouching in any way for its worthiness or the truth of its claims!

To judge from the flood of rebuff and criticism the Council has been a failure — but has it? Compare the advertising pages of any of the "independent" journals of seven years ago (when the Council began its work), and the same journals to-day. In almost every case we venture there has been a noticeable elevation of the advertising tone — a cleaning up. In a criticism of the Council *American Medicine*[1] admits: "Vast improvement has been made in every "worth while" independent medical journal, and the whole movement is upward and forward." Such palpably undesirable ads as "Duffy's Malt Whisky" and "Antikamnia" have been dropped by most journals.

But if this partial cleaning up of medical advertising were all the result of the work of the Council the efforts would have been repaid. There are a considerable number (eighteen) of medical journals that are strictly following the Council in their advertising pages:

The Journal of the American Medical Association.
Southern Medical Journal.
Cleveland Medical Journal.
Surgery, Gynecology and Obstetrics.
Colorado Medicine.
California State Journal of Medicine.
Journal of the Indiana State Medical Association.
Illinois Medical Journal.
Journal of the Iowa State Medical Society (no advertising at present).
Kentucky Medical Journal.
Bulletin of the Manila Medical Society.
THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.
Bulletin of the Medical and Chirurgical Faculty of Maryland.
New York State Journal of Medicine.
Journal of the Tennessee State Medical Association.
Texas State Journal of Medicine.
Military Surgeon.

1. American Medicine, January, 1912, p. 12.

Bulletin of the American Academy of Medicine.

Many of these, it is true, are "official" or "organization" journals, but they are nevertheless medical journals and depend to nearly if not as great an extent on their advertising for their support as do the "independents." Besides these journals — and a goodly number they are to come into the fold in seven short years — several others are essentially clean, erring in the instance of only one ad — *Old Dominion Journal of Medicine and Surgery,* carrying Valentine's Meat Juice; *Delaware State Medical Journal; Journal of the Medical Society of New Jersey* and *Northwest Medicine,* which, strange to say, offend with the same ad—Glycothymoline.

Verily the work of the Council has been far-reaching.

IN MEMORIAM

Dr. E. Nelson Heysett, Rush Medical College, 1890, of Baldwin, Mich., a member of the Osceola County and Michigan State Medical societies, died in Chicago, March 18, following an operation for appendicitis.

Dr. John M. Gallery, University of Michigan, 1883, died at his home in Eaton Rapids, February 5, aged 54.

Dr. Neil McLure, University of Michigan, 1878, died at his home in Marlette, January 28.

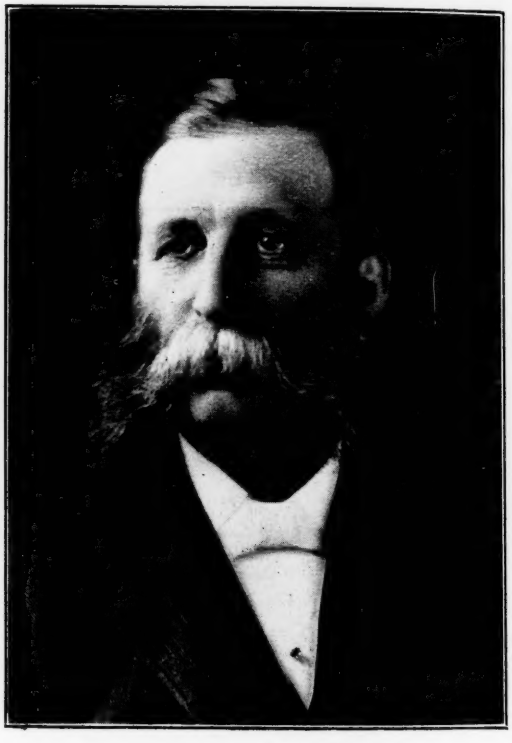
Dr. Samuel Catlin, Yale University, 1851, an honorary member of the Michigan State Medical Society, died at his home in Tecumseh, March 15, aged 85.

Dr. Edwin S. Ely, Hering Medical College, Chicago, 1900, a member of the Michigan State Medical Society, died at his home in Bay City, March 2, from nephritis, aged 44.

Dresser B. Vincent (license, Mich., 1900, thirteen years of practice), died at his home in Coldwater, February 25, from senile debility, aged 85.

Dr. Albert S. Wilson, University of Michigan, 1894, of Bellevue, died April 4, after an illness of several months.

Dr. Henry O. Walker was taken sick with pneumonia, March 26, and died April 5. He was born in Leesville, a suburb of Detroit, in 1843. He received his education in the schools of Detroit and at Albion College. He studied medicine



HENRY O. WALKER, M.D., PRESIDENT, 1894

at the University of Michigan, and Bellevue Medical College, New York, where he graduated in 1867. He was associated with the late Dr. E. W. Jenks for some years. He became a member of the faculty of the Detroit College of Medicine very early in its history and occupied different teaching positions during its growth. He taught anatomy and surgery mostly. He occupied the position of secretary of the board of trustees and faculty for a number

of years. He was honored by the profession at large many times by election to various posts of honor, and was president of the Michigan State Medical Society in 1894.

Dr. Walker's career was principally a surgical one, as we all know. He was not only an energetic surgeon, but a successful one. His work was marked by the exercise of courage, judgment and conscientiousness. An operator without theatrical display, but bold and energetic in emergency. Conservative and precise in the face of danger, and endowed with a manhood which never shirked responsibility, he was ever solicitous of consequences, and therefore always a safe custodian of his patient. He was always ready to advance with the changes incident to the development and evolution of surgical science and art; but not a faddist who would abandon experience to chase chimerical ideas because they bore the label of science. Never emotional, his ideas and work came from the output of a calm, thinking machine. It is needless for me to call attention to our colleague's professional achievements with which we are all acquainted and of which we are proud.

As a teacher he was very successful, as the numerous graduates of the Detroit College of Medicine will willingly testify. He taught in several different departments from time to time, and always successfully. His teaching of anatomy and surgery was particularly efficient, because he managed to interest the pupils all the time, and with a peculiarly rugged force implanted in his hearer's mind the salient and practical points of the subject — not by means of eloquent flights of language, but by a sturdy manner of emphasis which was peculiarly his own.

As secretary of the faculty of the college he proved to be little short of a genius. His immense capacity for work, for the grasping of details and the evolution of them from out his active mind, as chunks of common sense, was certainly marvelous. A medical friend of mine one day said: "I understand Dr. Walker runs your college." I replied: "Yes, I guess he does; we depend on him for everything excepting telling us what and how to teach." Certainly his enthusiasm, energy and common sense did much toward making the college a success.

Speaking of our colleague as an honored member of our profession, as a friend, and as a man, I would state that he was known and respected throughout the profession of our country for his honorable standing, his ability and his work, as well as for his generous, ardent and persistent efforts in behalf of the medical profession.

He was an honest and honorable man! What greater tribute can be paid than this, to our departed colleague, especially in an epoch like the present of dissimulation and mammonism, when the ethics involved in the broad principles of the brotherhood of man as preached by Jesus Christ and the founders of Judaism are ignored for the scintillating shrine of Mammon. I say again, what greater tribute can we pay any person than to declare he was an honest and an honorable man! and certainly Dr. Walker was. He was truthful, honest, benevolent, virtuous, and never afraid to die! As an illustration of his honesty let me briefly relate the following incident: Dr. Walker had been induced by a promoter to invest in and boost a business scheme, and had been induced to influence some of his friends to join. In course of time, and rather a short time, too, the company went the way of all fictitious affairs, leaving its members with their experience only. Now, what did our noble colleague do? Avail himself of the technicality of the law, get out and condone with his acquaintances? No, he took the

full responsibility (which he need not legally have done), paid the debts amounting to several thousand dollars and closed the concern. So quietly was it done that but few knew it.

Now, when speaking of our colleague, as a friend, I almost falter. Dr. Walker and I were close friends for many years. Our interests were identical in many ways through our college and hospital associations. I think outside of his family few knew him better than I did. While he was always reasonably aggressive, and therefore a splendid fighting partner, he never chose to be belligerent excepting for the support of a principle. He was always a frank, true, gentle friend. He was ready to make any necessary sacrifice for any cause in which he was engaged. He was always just, benevolent and charitable to his medical fellows and to his patients.

Impatient of slowness in the course of events, but at the same time reasonable, his sometimes brusque manner and apparent impetuosity were natural but never intended to be offensive, for he had a warm, kind heart back of his expressions. He and I have often had decided differences of opinion and controversies, but never with the slightest feeling of envy, malice or jealousy, for he was full of tolerance, justice and good nature, above everything. His life as a citizen, as well as a member of our profession, has shed a beneficent influence throughout his whole environment, and, moreover, will live through all time to shed its luster on his contemporaries and successors. He was never superstitious; he lived the life of a true man, and died without fear of death. And to say farewell to this beloved friend and noble character, to see him go to the sepulchre of eternal rest, spreads a pall of melancholy over me that is inexpressible. How I shall miss him! Always conscious of the lonely spot in life's path filled only by the memory of this dear, good friend, and at last to say farewell constitutes a pathetic epigram better expressed by the lines of Hood:

"Farewell! Farewell! It is an awful word
When that the quick do speak it to the dead:
For though, 'tis brief upon the speaker's lips,
'Tis more than death can answer to, and hath
No living echo on the living ear."

ERNEST L. SHURLY.

H. O. WALKER, M.D.

One by one we must all fall by the hand of Death; one by one we must all pay the price. The price of Life is Death, and yet, death is nothing more than the bursting forth into the fullness of Eternal Life of the fragrant rose-buds of Humanity. Life is a great school of discipline, and fits us for the larger and more complete living in the Great Beyond.

And so, to-night, somewhere far out in the distant blue among the stars, unfettered by the laws of Time and Space, our friend and brother is living the larger and more complete life, and has heard Him say "Come up higher and behold my glory." E. T. ABRAMS.

SOCIETY NEWS

ALPENA COUNTY MEDICAL SOCIETY

Drs. Bertram and Komoracki entertained the physicians at dinner at the Alpena House, February 19. The subject for discussion that proved of most value to the society was appendicitis. Dr. F. J. McDaniels had prepared an excellent paper on "Acute Perforative Appendicitis." The fourteen doctors present entered into an animated discussion of the subject, which resulted in a general agreement as to the method of treatment. The use of the hot poultice was generally condemned in all cases of acute inflammation in the abdomen, as hastening the formation of pus. The doctor out-

lined a method of non-operative treatment during the acute stage which had proved to be the most effective.

A program committee consisting of Drs. Williams, Cameron and Bonneville was appointed to arrange the programs for the regular meetings. This committee is planning to have some of the best medical talent of the state appear before the Society.

Wonderfully effective work has been done in Alpena in times past by our local physicians without a hospital. No doubt the Mayos were doing good surgery in Rochester, Minn., before the railroad accident that necessitated a hospital there; but no one ever heard of them. A hospital gave them an opportunity to make their work known. Now the little town of 5,000 is the center of the surgical world. Many in this town have been saved from an untimely grave by the prompt action of their physicians, but only a few have heard of it. In a hospital good work is recognized and appreciated by all the inmates and attendants, and the doctor receives the benefit of the improved reputation. Constant association with each other will give each the benefit of the others' experience, and redound to the good of all concerned.

C. M. WILLIAMS, Secretary.

The Alpena County Medical Society held its regular meeting March 21. Dr. J. A. MacMillan of Detroit and Dr. L. C. Kent of Onaway were the guests of honor. Dr. MacMillan held a surgical clinic at the office of Dr. D. A. Cameron at which he beautifully demonstrated his operation for hernia, and appendicitis. The Alpena Society considers these clinics, which occur every three months, of great practical value. They hope to have for the June meeting a skin clinic, conducted by a specialist in skin diseases.

The event of the meeting was a banquet at the Alpena House, given by Drs. A. E. Bonnerville and George Secrist to the Medical Society and guests. From the time the orchestra rendered its first selection at 6 o'clock till the members reluctantly adjourned at near 11, the meeting was a great success.

Following an elaborate dinner in the dining-room, the members adjourned to the parlors, where an interesting program was carried out. J. A. MacMillan gave an interesting address on "The Necessity of Operation in Hernia." The doctor showed that only 10 per cent. of the ruptured ever submit to the radical cure, and that by reason of wearing trusses and other palliative measures their earning capacity is greatly decreased. Likewise they are always liable to strangulation of the hernia. Over 90 per cent. of these operated on never have a return of the rupture. The doctor thought the great reason for the refusal of operation was the wholesome fear of a general anesthetic, and a lack of knowledge as to the benefits to be derived from the operation.

Dr. L. C. Kent, of Onaway, gave an address on the "Management of Typhoid Fever." It was an excellent résumé of the subject, and brought out a spirited discussion from all the members present.

One of the features of our meetings is the general interest in the papers. The members make a study of the subjects on the program, and are thus prepared to properly discuss them. Nor do we have any trouble in securing papers themselves. A program committee of Drs. Williams, Bonnerville and Cameron assign the subjects, and it is expected that every member will read a paper during the year. Every three months it is expected to have a clinic with an outside physician as demonstrator.

Our Society has been much helped by reason of having the new thirteenth district organized. Our councilor, Frank C. Witter, keeps us enthused by letter and by his presence occasionally, and we much enjoy the new arrangement.

C. M. WILLIAMS, Secretary.

BAY COUNTY MEDICAL SOCIETY

Since the first of January the Society has adopted a new plan of conducting meetings. Instead of original papers by the members, there have been reviews of important articles in various leading medical journals, followed by a general discussion. Meetings have been held weekly, and the attendance has been fully up to the average of previous months. In March, four meetings were held with an average attendance of fourteen. Three reviews are usually presented, which requires that each member spend considerable time in considering and getting before the Society in the fewest words possible the main points of the paper. This in itself is good practice.

At the March business meeting, it was voted that the adoption of by-laws be a special order of business for the April business meeting.

Since incorporation, a new set of by-laws is necessary, and it is hoped a large number will be present.

H. W. BRADLY, Secretary.

CALHOUN COUNTY MEDICAL COUNTY

At the regular meeting of the Calhoun County Medical Society held April 2, 1912, at Battle Creek, Dr. Hugo A. Freund, of Detroit, read a very interesting and instructive paper on "Clinical and Instrumental Methods of Estimating the Efficiency of the Heart." He paid especial attention to estimating the efficiency of the heart, rather than the heart sounds, and discussed the various newer methods, especially the electro-cardiograph. Dr. M. A. Mortensen of Battle Creek read a paper on "Prophylaxis and Management of Cardiovascular Conditions," recording a plea for the early recognition of cardiovascular conditions and the institution of the proper treatment so that the later severe manifestations may be avoided. These two papers will appear in an early number of THE JOURNAL.

R. C. STONE, Secretary.

GENESEE COUNTY MEDICAL SOCIETY

Special meeting of the Genesee County Medical Society was held April 2, 1912. Attendance 26.

It was moved and supported that the Society should avail itself of the opportunity of having one of the lectures given under the auspices of the Health and Public Instruction Department of the A. M. A.

Drs. Manwaring and Cook were appointed as a committee to find out the feeling of the School Board in relation to the appointment of physicians as medical inspectors of school children.

Dr. E. C. Rumer read a paper on Salvarsan. After reviewing the literature somewhat pertaining to the use of Arsenic in the treatment of syphilis he gave in detail Ehrlich's reasoning and experiments with organic preparations of arsenic culminating in his desires and hopes of attaining *sterilisans magna* in the treatment of syphilis by the single injection of an adequate non-toxic dose of "606." He failed to attain this end in all cases and found it impossible to eliminate at the present time the use of mercury and the iodids in the treatment of this disease. To justify the early enthusiasm of its users he cited the brilliant results obtained by Neisser whose extensive use of the preparation qualifies him as an authority, and compared its specific action in the treatment of syphilis with the specific action of quinin in the treatment of malaria.

The paper was a scientific résumé of what is known of salvarsan up to the present time and showed a great amount of study in its preparation.

Dr. Don Knapp read an interesting paper on "Typhoid Vaccination."

C. P. CLARK, Secretary.

GRATIOT COUNTY MEDICAL SOCIETY

At a meeting of the Gratiot County Medical Society March 21, 1912, the following resolution, as suggested by the Newaygo County Medical Society, was adopted:

Resolved, That the State Board of Health be asked to make the Wassermann test for syphilis gratuitously the same as the Widal test is now made.

Dr. I. N. Brainerd was chosen delegate and Dr. E. M. Highfield, alternate delegate, to the State Society meeting in Muskegon.

E. M. HIGHFIELD, Secretary.

KALAMAZOO ACADEMY OF MEDICINE

Vaccination is a timely topic. Following up the suggestions of the president, Dr. Clark, at the last meeting, that all members observe their cases closely and report, we are asking that all contribute reports on work done up until now. It is especially desired that full details may be had of cases which have had complications, that there may be a common understanding of how to avoid them, and to know how many actually occur.

An innovation, which we hope will become a permanent practice, has been introduced in programs at the suggestion of the Library Committee, namely, that one member be appointed to scan the journals in the library, to give the titles of a few of the most important articles, and a very brief summary of contents. It is hoped that this will both stimulate a use of the library and also help to call our attention to articles we may not have read. Exhaustive reports, however, are not to be given.

The program for the March 12 meeting was:

1. Facial Deformities — Their Cause and Effect. Dr. S. J. Lewis, Kalamazoo.
2. Fever — Its Nature and Significance. Dr. Victor C. Vaughn, Ann Arbor.

C. E. BOYS, Secretary.

The plan of having some member of the Academy report briefly on important articles found in current magazines in the library was inaugurated at the March 26th meeting, Dr. A. W. Crane giving the report.

Informal discussion was engaged in by the membership on the subject of vaccination, with especial reference to the complications. In over 3,000 vaccinations in Kalamazoo, members were unable to find any authentic reports of serious harm due to vaccination.

Two very excellent papers were given, one by Dr. A. W. Blain, of Detroit, on the subject "The Cancer Problem," and one by Dr. D. J. Levy, also of Detroit, on the subject, "Simple Methods in Infant Feeding."

Fifty Academy members and invited guests assembled at the Burdick House on the evening of March 26 to do honor to Dr. Adolph Hochstein. This was the first event of its kind in the history of the society. Many tributes were paid the doctor for his high ideals of practice and his interest in medical society work, his fairness to other members of the profession, his interest in the public welfare, and his courteous bearing toward all.

After a six-course banquet had been served by the management, the president, Dr. O. H. Clark, introduced Dr. George D. Carnes, of South Haven, as toastmaster for the occasion.

C. E. BOYS, Secretary.

LENAWEE COUNTY MEDICAL SOCIETY

The April meeting of the Lenawee County Medical Society was well attended and all took an active part in the discussions. Dr. Sutton of Clayton made a good quiz master. The next quiz master is Dr. C. Kirkpatrick of Adrian. Come out and hear him give his paper on "Graft." Bring your list of "Dead Beats" to the Society for there is something doing.

I. L. SPALDING, Secretary.

MUSKEGON-OCEANA COUNTY MEDICAL SOCIETY

Regular meeting of the Muskegon-Oceana County Medical Society was held at the residence of Dr. Jacob Oosting, Friday evening, March 8. Members present: Drs. George S. Williams, John VanderLaan, F. W. Garber, R. G. Olson, J. T. Cramer, W. P. Gamber, W. A. Campbell, Jacob Oosting, F. B. Marshall and V. A. Chapman.

The minutes of the last meeting were read and approved as corrected.

The committee regarding resolutions on the death of Dr. J. G. Jackson reported through its chairman, Dr. W. A. Campbell, and presented the following letter of sympathy for the widow of the late Dr. Jackson:

"We, the members of the Muskegon-Oceana County Medical Society, desire to express hereby our most sincere sympathy for the loss of your husband, the late Dr. James G. Jackson. We wish also to express our regard and our high appreciation of his merits as a physician, as a citizen and as a man. In the death of Dr. Jackson we feel that the medical profession has lost an able, progressive and kindly member from its ranks, and the community a valuable citizen and a good man. With regards and best wishes for you and yours,

"Very truly,
"WILLIAM A. CAMPBELL,
"JACOB OOSTING,
"A. A. SMITH,
"Committee."

It was moved, seconded and carried that the report made be accepted and that a copy of the resolution be spread on the minutes of this meeting and a copy also forwarded to the widow of Dr. Jackson, and to THE JOURNAL of the Michigan State Medical Society.

The committee regarding the holding of a public meeting to be addressed by some speaker from out of the state as arranged by the American Medical Association reported that the Woman's Club Building could be obtained free of charge for the holding of this lecture, and that the Bureau of Social Service would aid on expenses to the amount of $10, providing that the subject be on that of "Tuberculosis."

It was moved by Dr. Marshall, seconded by Dr. Gamber, that the secretary be instructed

to request the American Medical Association to allot a speaker for a meeting of this kind.

The report of the committee was accepted and the committee continued for a further report on the same matter.

A communication was read from Dr. C. T. Eckerman requesting that his name be dropped from the membership of this Society. Dr. Eckerman's request was granted.

Dr. Hotvedt introduced the matter of the Vi-ava active campaign conducted by the Vi-ava treatment promoters and suggested that something be done by this Society in the way of enlightening the people as to the true fraudulent character of this Vi-ava treatment. It was moved by Dr. VanderLaan, seconded by Dr. Campbell, that the matter be placed in the hands of Dr. Hotvedt and the secretary for investigation.

A communication was read from the secretary of the American Medical Association explaining the Owen bill. Dr. Campbell moved and Dr. Marshall seconded that this Society approves of the Owen bill, and that the secretary be instructed to write to the Hon. J. C. McLaughlin requesting his earnest support of the measure. Carried.

Dr. Hotvedt gave a talk on "Bursa and Bursitis of the Knee." The discussion was opened by Dr. Marshall followed by Drs. Campbell, Gamber, Garber and others.

After luncheon the meeting adjourned.

V. A. CHAPMAN, Secretary.

WAYNE COUNTY MEDICAL SOCIETY

At the meeting of the Medical Section on March 11, Dr. C. E. Simpson read a paper on "Chronic Appendicitis and Indigestion."

Dr. James Cleland, Jr., and Dr. R. L. Clark presided as chairman and secretary.

Eighty-two members were present.

Chronic Appendicitis and Indigestion

By C. E. Simpson

Chronic appendicitis as a cause of digestive troubles has come to be recognized comparatively recently. Ewald called attention to the relation between the two in 1899. In 1910 Moynihan, Paterson, Fenwick and others in England again brought the subject to the front, and since then there have been many reports of indigestion which have been entirely relieved by the removal of a chronically diseased appendix.

There is no characteristic type of indigestion. Often it simulates gastric ulcer closely, even to the vomiting of blood. In other instances there is a feeling of fulness after eating, eructations of gas, occasionally vomiting or periodical attacks of general abdominal pain. Diarrhea has been found due to chronic appendicitis. These same symptoms are found in the presence of various other pathologic conditions such as ulcer, gall-bladder pathology, cancer of an abdominal organ, hernia, pelvic lesions and diseases of the stomach itself. The matter of diagnosis then becomes of prime importance. The signs are not those of an acute appendicitis, and often there is no history of any previous acute attack. Some analyses of cases have been made which would seem to indicate that the frequency of indigestion increases with the number of acute attacks.

A very carefully taken history should be the first step in diagnosis, followed by a thorough physical examination. As a rule gastric findings are within normal limits though they may vary either way, frequently enough to make the examination of stomach contents of secondary importance.

In the physical examination often no tenderness over the appendix will be discovered until the colon is dilated with air from an atomizer bulb.

In distinguishing between ulcer and chronic appendicitis remember that in the former condition the characteristic feature is the regular return of pain and its accompanying vomiting, gas and sour eructations, day after day, and their control by food or lavage. Exertion often brings on pain in chronic appendicitis, and the pain, while epigastric or but poorly localized, may radiate to the right lower quadrant.

Gall-bladder inflammation or gall-stones often give a prolonged dull pain in the liver area and radiation of pain is more often to the right and back. Disappearance of pain after a gall-stone attack is prompt, after chronic appendicitis gradual.

Treatment is only surgical.

The paper was discussed by Drs. Davis, Donald, DuBois of Grand Rapids, Carstens, Brown, Hirschman, Walker, Yates and Parmeter.

Dr. J. E. Davis said: Moynihan says rigidity was more marked in ulcer than in chronic appendicitis and that there is a jerky respiration in ulcer. The pains are splanchnic or

visceral and automatic or reflex. The visceral pain comes from the stretching of the muscles of the bowel either from within outward or from without inward. The reflex pains come from the transmission of the sensation to the cord and from thence back to the skin, thus causing tenderness on gentle palpation.

The ballooning of the bowel quite likely causes an antiperistaltic wave, thus irritating the appendix. He has found the ordinary test-meal very unsatisfactory. The peristaltic action of the bowel can be learned by feeding the patient rice and raisins the night before, as suggested by Mayo.

Dr. W. M. Donald thought the test-meal satisfactory as to hyperchlorhydria, which is most common in ulcer.

Dr. William J. DuBois, Grand Rapids, said: Too many physicians believe they can cure appendicitis when in reality there is no medical treatment for it in any of its stages. The laity fear the operation because of isolated instances of high mortality. Their fears should be allayed by teaching them the necessity of early operation with its coincident low mortality.

Dr. J. H. Carstens said that one reason for appendicitis in old age is the atrophy and degeneration of the appendix. If this degeneration and atrophy begin at the distal end of the appendix and progress proximally, then the danger of appendicitis is *nil*. But if this process is reversed, then constriction taking place anywhere in the extent of the lumen may result in infection. He believes in early operation of course.

Dr. G. V. Brown pointed out the differential diagnosis of right adnexal disease from appendicitis.

Dr. L. J. Hirschman thought it strange that more cases of diarrhea did not result from appendicitis, since one would expect an irritation of the mucosa in and about the ileocecal region.

Dr. F. B. Walker called attention to a diagnostic point when the psoas of the right side is made to contract. He believes many cases of indigestion in children due to appendicitis.

Dr. H. W. Yates called attention to the necessity and value of the differential blood count.

Dr. Parmeter believes the symptoms of indigestion as a concomitant of chronic appendicitis is a well-recognized diagnostic symptom among the profession. He has made note of this symptom in practically all cases examined by him for the last four years, and he believes that in more than two-thirds of the cases that symptoms of indigestion have been present. He called attention to Rovsing's symptom and presented a specimen containing fecal concretions resembling peas in a pod, which was removed from a patient who had suffered and been treated for indigestion for more than nine years.

At the general meeting of the Society, March 18, Dr. A. P. Ohlmacher reported a case of Addison's disease terminating in acute acidosis and demonstrated the specimen obtained post mortem showing simple atrophy of the adrenals. As a source of comparison he showed with the atrophic adrenal a normal adrenal also obtained post mortem.

Dr. Angus McLean read a paper entitled "A Résumé of a Year's Surgical Work."

The following applications for membership having been favorably considered by the Board of Directors were admitted to active membership by vote of the Society:

John N. Swartz, U. of M. '92, Detroit; Arthur L. Worden, U. of M. '79, Detroit; Kenneth W. Dick, D. C. of M. '07, Detroit; George H. Hardy, D. C. of M. '07, Detroit; L. P. Breitenbach, D. C. of M. '11, Detroit.

Vice-President B. R. Schenck and Secretary E. K. Cullen presided as chairman and secretary.

Ninety members were present.

A Résumé of a Year's Surgical Work

By Angus McLean

The number of operations included amounted to about 1,100. Special reference was made to the diagnosis, anesthesia, preliminary and after treatment, and mortality.

For diagnosis, a carefully written history is always a great aid, for by means of it mistakes, especially those due to carelessness and negligence, are usually avoided. Special blood examination, as well as cystoscopic, *x*-ray ophthalmoscopic examinations, etc., are also very often of inestimable value.

The anesthetic should always be given by a skilled anesthetist. Patients have come to dread the anesthesia more than the operation itself. The danger from anesthesia is much increased if given by a novice. Ether has been the anesthetic of choice. In many cases

nitrous oxid gas and oxygen are given. This latter is being used more and more. Ordinarily the anesthetic is preceded by a hypodermic of morphin sulphate gr. $^1/_6$ and atropin sulphate gr. $^1/_{150}$. In order to reduce to a minimum the amount of anesthetic, operations are performed as expeditiously as is consistent with thorough work. Anesthesia is discontinued as early as possible.

In the after treatment careful attention to elimination and the administration of as little morphin as possible is always insisted on. The stomach and rectal tube are always used early, that is, as soon as distention or vomiting become evident. Only albumins, water and tea are allowed the first two days.

The operations were classified according to the various anatomic regions such as thyroid, breast, stomach, gall-bladder, appendix, kidney, prostate, uterus, pelvic appendages, etc. The number, complications and mortality in each class were discussed.

The total mortality in the 1,100 cases was twenty-nine, or 2.45 per cent. There were 652 major operations and among these the mortality was nineteen, or 2.67 per cent.

The deaths that occurred were due either to severe accident, to carcinosis, to advanced peritonitis (that is in cases admitted with advanced peritonitis), or to ileus and embolus.

The latter two are really the only post-operative deaths. The number of ileus deaths was one, less than ever before, due it was thought to following the rule of performing an enterostomy early. The number of embolus deaths was three.

The paper was discussed by Drs. Blodgett, Spitzley, Metcalf, Schenck, Cullen and Longyear.

Dr. A. W. Ives has presented to the Society a copy of a lithograph showing the vaccine pustule in various stages.

The lithograph was printed for Dr. Ives' great grandfather, Dr. Valentine Seaman, surgeon to the New York Hospital, and was printed about 1798. Framed with the cut is a visiting card of Dr. Jenner.

At the meeting of the Surgical Section, March 25, Dr. Raymond C. Andries read a paper, illustrated with charts and diagrams, entitled "Ileus."

Eighty members were present.

Ileus *

By R. C. Andries

The paper dealt principally with the cause of death in ileus uncomplicated by peritonitis. The deductions made were derived from experiments performed on dogs, rabbits and guinea-pigs.

The experimental ileus was produced in dogs by dividing the bowel 8 inches from the pylorus and sewing the cut edges together. The cut edges thus sewed together made blind ends. These were inverted and again approximated by a row of Lembert sutures. This method was adopted because by means of it death would occur without an accompanying peritonitis. (Cultures taken from the peritoneal cavity after death were negative).

The intestinal contents proximal to the obstruction were filtered and injected into guinea-pigs; in some cases sterilized, in others unsterilized. The pigs lived in both cases.

The blood-serum of ileus dogs was next used. This in some instances produced fatal results, in others it did not. It was then found that normal dog serum had this same effect on guinea-pigs. Instead of using guinea-pigs for the injections, dogs and rabbits were next used. These survived the injections in every case. The dogs and rabbits did not even appear ill after the injections of serum taken from the blood of dogs dying with ileus.

The blood of dogs dying from ileus was also transfused directly into normal dogs without producing symptoms of intoxication. After the transfusion the recipient dog seemed as lively as ever. It showed no signs of poisoning. The average weight of the recipient dog was 13.77 pounds and the average amount of ileus blood it received was 13.4 ounces.

Bacteria could not be demonstrated in the blood of dogs dying from ileus.

The dogs lived on an average of sixty-seven hours and during that short time they lost considerably in weight. This loss in weight amounted to about one-tenth of the body weight, all due to a loss of body fluids. The loss of body fluids causing a grave disturbance in the circulation, especially in the circulation of the vital centers in the brain plus some probable reflex disturbance of the sympathetic nervous system, analogous to the reflex dis-

* The experimental work for this paper was done in the research laboratories of Parke, Davis & Co.

turbance that takes place when death is caused by a severe blow on the solar plexus, must be considered as prime factors in the causation of death in ileus.

A few hints for the treatment of ileus in the human subject were given.

SUMMARY

1. Death in ileus as far as we can determine is not due to a toxemia; i. e., it is due neither to the absorption of bacteria or their toxins nor to the absorption of some altered physiologic secretion.

2. A depletion of the vascular and lymph system, causing a grave disturbance in the circulation, especially in the cerebral circulation, is a prime factor in the causation of death.

3. A pathologic change in the sympathetic nervous system, a loss of sympathetic control, is probably contributory.

4. Treatment must first of all relieve distention and secondly refill the depleted vessels.

Dr. F. B. Walker said: Dr. Andries' work is to be commended, not only for its intrinsic value but also on account of the advantage to him in going on with it further.

I have had results in experimental work similar to his. Mere tying of the gut is not satisfactory, does not produce complete obstruction. Too tight a ligature will end in peritonitis. A loose one will not close the gut, and if drainage be ever so slight dogs will survive a comparatively long time.

Dr. Andries caused obstruction about 6 inches from the pylorus in the duodenal portion. Those dogs all died in from three to four and one-half days. I have made it lower down, from the duodenojejunal junction all the way to the ileum and the dogs would live a longer time. Dr. Maury, in the course of his 400 experiments found the lethal line to be 35 cm. from the pylorus. Dogs with a short loop, shorter than 35 cm., would die before a stoma would be made by a twine placed in a triangular form through stomach and small gut after the manner of a McGraw ligature. Long looped dogs would survive the stoma. He pursued those studies to the extent of eliminating the bile as the cause of the phenomena of ileus and inferred that the pancreatic juice and the absence of antibodies to counteract its effect was the source of the intoxication. He was so satisfied with that conclusion that he asked for corroboration of it. It is deserving of that consideration.

The paper was also discussed by Drs. T. A. McGraw, W. H. Hutchings, Angus McLean, C. D. Brooks and J. E. Davis.

At the general meeting on April 1, 1912, Dr. H. A. Freund read a paper entitled "Clinical and Instrumental Methods of Estimating the Efficiency of the Heart," illustrated with charts, diagrams, *x*-ray plates and specimens.

The following applications for membership having been favorably considered by the board of directors, were accepted by the Society for membership, the first to active and the latter two to associate membership:

E. P. Mills, D. C. of M. '99, Detroit.

W. C. Pepin, D. C. of M. '06, Windsor.

W. E. Loud, Jenner Med. Coll. '04, Detroit.

Dr. Angus McLean demonstrated a little patient upon whom he recently operated for the correction of a nasal defect by transplanting a flap from the right arm, making use of the Italian method. The right ala of the nose had been destroyed by the application of arsenical paste by a quack in the effort to destroy a nevus.

Vice-President B. R. Schenck and Secretary E. K. Cullen presided as chairman and secretary.

Sixty-eight members were present.

Clinical and Instrumental Methods of Determining the Efficiency of the Heart

By Hugo A. Freund

We have all at our constant command those faculties that determine the integrity of the cardiac mechanism. By inspection, palpation, percussion, and auscultation one may determine the efficiency of the heart.

Inspection reveals bulging, pulsations, retractions, cyanosis, edema, etc. Palpation determines thrills, shocks, rhythm, rate, regularity, volumn, tension, and quickness of the pulse and of the heart. Percussion sheds light upon its size in the various directions. Both the deep and superficial should be determined. Auscultation informs us of murmurs, accentuations, reduplications, divisions and interpolation of sounds. Friction rubs are also of importance.

Instrumental methods are the polygraph, the skiagraph, the sphygmomanometer and the electro-cardiograph. By the aid of the poly-

graph variations in the various waves of the venous pulse are determined. Heart block, extrasystoles, absolute arhythmias, paroxysmal tachycardia, pulsus alternans, and other irregularities are determined. With the skiagraph and orthodiagraph, size, expansion and pulsations of the chambers of the heart are seen. The blood-pressure is a valuable aid in determining the strength of the muscle and the load against which it must work. The systolic and diastolic should always be taken. The electrocardiograph registers the action currents of the heart brought out by the excitation of the conducting system. By this method every form of cardiac insufficiency and irregularity may be absolutely and simply determined.

No one can do without the use of the clinical methods of inspection palpation, auscultation and percussion. The instrumental methods are not essential. Yet they give us invaluable information in the study of the efficiency of the heart and must be considered as useful aids in clinical examinations.

Dr. W. J. Wilson, Jr., said: Under favorable conditions in a hcspital, an accurate blood-pressure reading can be made in five minutes and both jugular and radial pulse readings in 15 minutes more. The speaker is more interested in therapeutics than in diagnosis. Successful therapeutics must be based on accurate diagnosis, however.

For some time I have been doing pulse tracings in the wards of St. Mary's Hospital, where we have a large number of heart cases, in one service alone there being in the course of two weeks three cases of tricuspid regurgitation, from two of which I obtained positive venous pulse tracings. In one of these I administered intravenously in the external jugular vein, 1 c.c. of 1-to-1,000 strophanthin solution, the blood-pressure (systolic) rising from 100 mm. to 120 mm. in the course of 20 minutes, but the patient was in extremis and died 24 hours later.

Dr. Wilson then showed a tracing taken in the pharmacological laboratory of the Detroit College of Medicine with the mercurial manometer from the carotid artery of a dog, showing the marked beneficent effect on the blood-pressure and pulse of a similar dose of strophanthin administered by the femoral vein.

Two tracings from a patient in another service at St. Mary's Hospital were then shown, one taken March 27, 1912, showing numerous ventricular extrasystoles, the other, April 1, 1912, showing a normal arterial and venous pulse. This was a case of pure mitral regurgitation following rheumatism of two years' standing with remissions. Believing there must be some point of excessive irritability in the ventricular walls due to the long standing inflammation, sodium iodid in 10-gr. doses was administered three times a day succeeding the first tracing with the result above mentioned. I believe with one of the discussers that the only correct way to estimate the blood-pressure is by the auscultatory method. Using the Mercer instrument, we place a stethoscope, usually the Bowles instrument, just below the elbow on the flexor surface of the arm. All through the period of pulse pressure, a marked thud in the brachial or ulnar artery is perceived with each pulse wave, this disappearing just above the point of systolic pressure and just below the point of diastolic pressure. As the sense of hearing is much more acute than the sense of touch, much more accurate readings are obtained, and also readings are obtained in cases otherwise impossible to secure.

The paper was also discussed by Drs. Mercer, Haass, Rich and Jennings.

ROLLAND PARMETER, Reporter.

THE DETROIT OTOLARYNGOLOGICAL SOCIETY

At a regular meeting held at the Wayne County Medical Society building on March 19, the following program was presented:

1. (*a*) Presentation of a patient on whom Heath's operation had been done. (*b*) Report of a Killian operation.

Dr. H. H. Sanderson.

2. (*a*) Report of two cases of sigmoid sinus thrombosis. (*b*) A case of loose bone in mastoid process. Dr. Don M. Campbell.

3. A case with obscure pyemic temperature following mastoid operation.

Dr. Harold Wilson.

4. (*a*) Report of a case of spontaneous tympanomastoid exenteration. (*b*) Second report of a case of keloid formation in a scar following a mastoid operation. Dr. Emil Amberg.

A dinner participated in by the members preceded the program. E. A.

NEWS

Dr. Victor C. Vaughan, of Ann Arbor, delivered an address on "Fever; Its Nature and Significance" at the joint meeting of the Rock County Medical Society with the Third Councilor District Society of Wisconsin at Beloit.

The right of the state of Indiana to prohibit the sale of preserved foodstuffs containing benzoate of soda was upheld in a report to the federal court of the findings of Edward Daniels, master in chancery, who heard testimony in a suit against H. E. Barnard, state food commissioner, and the State Board of Health by the Williams Brothers Company of Detroit, Mich., and the Curtice Brothers Company, of Rochester, N. Y. Products of these companies were barred from sale in the state by the health authorities on the ground that they contained benzoate of soda. The companies sued for a restraining order, setting up that benzoate of soda was harmless in small amount. The master of chancery finds the plaintiffs failed to make their case against testimony of experts introduced by the state.

At the annual spring elections on April 1, the following doctors were elected as mayors of their respective cities:

A. W. Chase, Adrian.
J. B. Stevens, Yale.
W. A. Lemire, Escanaba.
W. J. Pinkerton, Bessemer.
G. G. Barnett, Ishpeming.

Since March 1, the following articles have been accepted for inclusion with New and Non-official Remedies:

Capsules of holadin succinate of soda and bile salts (Fairchild Bros. & Foster).

Capsules of bile salts succinate of soda and phenolphtnalein (Fairchild Bros. & Foster).

Capsules of holadin, bile salts and phenolphthalein (Fairchild Bros. & Foster).

Euscopol (Riedel & Co.).

Eucodin (Riedel & Co.).

Iodo-casein (H. K. Mulford Co.).

Iodo-casein tablets, 2½ grs. (H. K. Mulford Co.).

Iodo-casein tablets, 5 grs. (H. K. Mulford Co.).

Formacin (Kalle & Co.).

At the Saginaw County Farmers' Institute, Jan. 25, 1912, Dr. R. L. Dixon, secretary of the State Board of Health, delivered an address on "Relation of the Farmer to the Health of the City." This address deals with sanitation as related to all farming operations, health conservation, typhoid fever, the typhoid fly, milk as a disease carrier, and sanitary precautions. The address is published in full in the *Michigan Dairy Farmer*, Detroit, Feb. 17, 1912.

Dr. Frederick C. Warnshuis, of Grand Rapids, secretary of the Kent County Medical Society, was operated on during the night of April 1 for acute appendicitis. He is reported as progressing very satisfactorily.

Alpena physicians stand for better sanitary conditions. They deplore the fact that the ice men have to harvest contaminated ice, by reason of State Street sewer emptying directly into the bay. A trunk sewer down State Street would give us better water at the intake pipe, a better ice-supply, a clean water-front, and the boys a good bathing-beach.—Alpena *Medical News.*

Judge Emerick recently, defining the power of the board of health and the board of supervisors as relates to physicians' contagious disease bills, ruled that the health board had the power to fix the compensation of the health officer to decide what diseases were contagious and as to the parties' ability to pay. The supervisors under the Francis law may pass on the necessity of the service, whether actually performed, and the reasonableness of the charge. This clear cut decision should create a better understanding between all parties concerned.—Alpena *Medical News.*

The editor is in receipt of a letter from the principal of the public schools of New Era stating that the town has a population of 500 with a contributing farm population of 1,500, and no doctor, the nearest doctor being 4 miles away. The population is American and Dutch. New Era is located on the Pere Marquette Railroad. Any one desiring further information address Mr. H. George Roest, New Era, Mich.

The annual clinic held by the Alumni Association of the Detroit College of Medicine will begin May 15 and continue for eight days.

The following are some of the clinicians who will be present: J. Rawson Pennington, professor rectal diseases, Chicago Polyclinic; Dr. E. S. Bullock, Silver City, N. M., physician and chief of a tuberculosis sanatorium; Dr. David Reisman, Philadelphia, professor of medicine in the University of Pennsylvania; Dr. George W. Norris, Philadelphia, professor in medicine in the University of Pennsylvania and specialist in arhythmias; Dr. Woods Hutchinson, New York, professor at New York Post Graduate School of Medicine, author, and consulting physician; Dr. Emil Beck, Chicago, professor North Chicago Hospital; Dr. Joseph De Lee, Chicago, noted obstetrician.

Dr. R. C. Jamieson has returned from his trip abroad and has reassumed his practice.

OFFICIAL CALL TO THE OFFICERS AND MEMBERS OF THE CONSTITUENT ASSOCIATIONS OF THE AMERICAN MEDICAL ASSOCIATION: The sixty-third annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 4, 5, 6 and 7, 1912, at Atlantic City, New Jersey.

The House of Delegates will convene at 10 a. m. on Monday, June 3, 1912, at Atlantic City, New Jersey.

JOHN B. MURPHY, President,

ALEXANDER R. CRAIG, Secretary.

Chicago, Ill., April 10, 1912.

April 13 Prosecutor Shepard of Detroit caused the arrest of the proprietors of Drs. K. & K., Babington & Thomas, and Hunt Medical Institute. Other arrests will follow. The charge in the case of K. & K. is "Maintaining an Anatomical Museum contrary to the law of 1905." The charges against the others are illegal advertising. Prosecutor Shepard has cleaned out the "Loan Sharks" and promises to clean out the "Specialist" Vampires.

Dr. F. B. Marshall of Muskegon sailed April 23 for a three months' European trip. He will study general surgery.

PROGRAM

PRELIMINARY PROGRAM OF THE 47TH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY TO BE HELD IN MUSKEGON, JULY 10-11, 1912

The following papers have been promised for the meeting. They are not arranged in the order of presentation.

SECTION ON GENERAL MEDICINE

1. The Clinical Action of Digitalis. H. A. Freund, Detroit.
2. Tuberculosis in Children. Collins H. Johnston, Grand Rapids.
3. The *X*-Ray in the Diagnosis of Internal Medical Conditions (with Demonstration). Preston M. Hickey, Detroit.
4. The Etiology of Cholera Infantum. Clara Davis, Lansing.
5. Cirrhosis of the Liver. I. M. J. Hotvedt, Muskegon.
6. Subject to be announced later. John B. Jackson, Kalamazoo.
7. Pneumonia. W. L. Griffith, Shelby.
8. Subject to be announced later. Carl D. Camp, Ann Arbor.
9. Subject to be announced later. John Crosby, Plainwell.
10. Subject to be announced later. C. W. Hitchcock, Detroit.

SECTION ON SURGERY

The following have promised papers for this Section, the subjects will be announced later:

Chairman's Address, C. D. Brooks, Detroit, Mich.

Major Frederick W. Hartsock, Fort Wayne, Mich.

P. M. Hickey, Detroit, Mich.

Jeannie Solis, Ann Arbor, Mich.

Alexander W. Blain, Detroit, Mich.

Channing W. Barrett, Chicago, Ill.

F. C. Kidner, Detroit, Mich.

F. C. Witter, Petoskey, Mich.

Angus McLean, Detroit, Mich.

R. E. Balch, Kalamazoo, Mich.

L. J. Hirschman, Detroit, Mich.

Frank C. Kinsey, Grand Rapids, Mich.

SECTION ON GYNECOLOGY AND OBSTETRICS

1. The Treatment of Marked Uterine Prolapse. Report of Sixty Cases Treated by Different Methods. Reuben Peterson, Ann Arbor.
2. So-Called Local Treatments. Indications; Use; Abuse. W. P. Manton, Detroit.
3. A Study of 180 Cases of Cancer of the Uterus, With Special Reference to Early Diagnosis. G. A. Kampermann, Ann Arbor.
4. The Toxemias of Pregnancy; Symptoms and Treatment. J. B. Whinery, Grand Rapids.
5. The Michigan Midwife Problem. Walter E. Welz, Detroit.
6. Lantern Slide Demonstration Illustrating the Conduct of Normal Labor. C. E. Boys, Kalamazoo.
7. The More Common Pelvic Deformities Causing Dystocia and the Methods of Detecting Them. H. H. Cummings, Ann Arbor.
8. Pathology of Cancer of the Breast and a Statistical Study of the Disease in Michigan. H. Van Den Berg, Grand Rapids.
9. Indications for and Methods of Inducing Abortion and Premature Labor. B. R. Schenck, Detroit.
10. The Control of the Pains of Labor. W. H. Morley, Detroit.
11. The Nature of Neurasthenia and Hysteria and Their Relations to Pelvic Conditions. R. R. Smith, Grand Rapids.
12. Lantern Slide Demonstration of Simple Uterine Displacements. Rolland Parmeter, Detroit.
13. Paper: Title to be announced later. H. W. Yates, Detroit.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

1. Chairman's Address. Robert W. Gillman, Detroit.
2. Chronic Suppuration of the Antrum of Highmore and Its Treatment by the Intranasal Operation. Otto T. Freer, Chicago.
3. Indications for Enucleation. Calvin R. Elwood, Menominee.
4. Report of Work on Nasal Sinuses. Benton N. Colver, Battle Creek.
5. The Use of Salvarsan in Interstitial Keratitis, with a Report of Cases. Walter R. Parker, Detroit.
6. Frontal Lobe Abscess. Don M. Campbell, Detroit.
7. Vaccine Therapy and Its Application in Diseases of Eye, Ear, Nose and Throat. D. B. Cornell, Saginaw.
8. Salvarsan; Its Use to the Occulist, and Laryngologist. R. C. Fraser, Port Huron.
9. Foreign Bodies of the Trachea and Esophagus. Preston M. Hickey, Detroit.
10. Nasal Reflex Neuroses. Edward J. Berstein, Kalamazoo.
11. Treatment of Corneal Opacities. F. W. Brown, Bay City.
12. The Need of More Closely Following Modern General Surgical Principles in Rhinological Practice. H. L. Simpson, Detroit.
13. The Surgical Tonsil with a Discussion of the Indications and Technic Required for Enucleation. B. R. Shurley, Detroit.
    Discussion: James M. DeKraker, Grand Rapids.
14. Cataract Operation. J. G. Huizinga, Grand Rapids.
15. The Narrow Nose. R. E. Mercer, Detroit.
16. Paper, Title to be announced later. R. T. Urquhart, Grand Rapids.

COUNTY SECRETARIES ASSOCIATION

1. Subject to be announced. G. M. Livingston, Manistique.
2. Subject to be announced. I. L. Spalding, Hudson.
3. Value of Publicity to Medical Societies. C. M. Williams, Alpena.
4. Tuscola County Medical Society Plan for the Care of the Indigent Sick. W. C. Garvin, Millington.
5. Address. Frederick R. Green, Chicago.
6. General Discussion. The Society Bulletin.

ANNOUNCEMENTS

Dr. Lunette I. Powers and Dr. Lucy N. Eames extend a special invitation to the women physicians of the State to attend the convention held in Muskegon, July 10-11. They are planning some special features which will not conflict with regular meetings of the Society. Among other things will be a banquet for the women physicians. Dr. Powers and Dr. Eames would be glad to hear from any who intend to come, in order to plan their entertainment.

COMMUNICATIONS

"WHAT'S THE MATTER WITH MICHIGAN?"

In our last number* we reprinted an editorial from the March 23d number of *The Journal of the American Medical Association,* captioned "What's the Matter with Michigan?". We addressed a few letters to medical men throughout the state asking their opinion of this matter for publication and herewith present their replies:

Detroit, April 2, 1912.

Dr. Wilfrid Haughey, Sec'y. Michigan State Medical Society.

My Dear Doctor:—Your letter asking my opinion of "What's the matter with Michigan" is at hand. I beg to state that in my judgment the trouble with Michigan is with the medical practice act. We have a law with rigid requirements for admission to practice, and severe penalties for violation of its provisions, but the act makes it no man's business to see that the law is enforced. It is made mandatory upon the prosecuting attorney of each county to prosecute offenders, but until complaint is made and evidence submitted sufficient to legally warrant prosecution he will not act, and it is the duty of nobody to make such complaint and present such evidence.

The board of registration is supported by fees from applicants and these fees have never been in excess of the expenses of the purely clerical part of the work. Hence during the existence of the present law there has been no systematic attempt to enforce it except as it applies to applicants for registration.

Medically the state of Michigan is like the farmer's door-yard, with a big black dog at the gate, his hair standing on end and his growl carrying menace in every note. But when this dog is once placated with a bone (*fifty bones* to be exact) you are his friend and he cares not what you do. I think one could practice medicine a considerable length of time in many sections of Michigan without any license at all, and I know that men are practicing whose right to do so has been forfeited under the provisions of the act; but the act is not enforced for there is no one whose duty it is to enforce it.

The condition discussed in the editorial to which you refer is a violation of the medical law of Michigan with an added violation of the United States postal regulations, but the state looks to the government to clean house instead of running its own vacuum cleaner. I would change the act so as to have; 1, a clear definition of what constitutes the practice of medicine; 2, a state appropriation for the board sufficient to meet *all* expenses; 3, the mandatory duty of the board of registration to make complaint and secure evidence against all violators of the medical law.

Very truly,

FRANK BURR TIBBALS.

Big Rapids, April 3.

Dr. Wilfrid Haughey, Editor, Battle Creek, Michigan.

Dear Doctor:—I don't believe that I have a single idea concerning "What is the matter with Michigan." It is all a new thing to me. It seems to be a matter, as presented in the *Journal*, that involves the postal department. So far as our state legislation is concerned other men have given it more attention than I have and may be able to suggest a remedy. If the individual doctor can be aroused to exert his influence we may achieve something in bettering our legislation so as to exclude fakers, but at present our state is an open field for back-door admission to the profession, while the front door is securely locked.

Very truly,

W. T. DODGE.

Detroit, April 3, 1912.

Dr. Wilfrid Haughey, Sec'y Michigan State Medical Society, Battle Creek, Mich.

Dear Doctor Haughey:—I beg to acknowledge receipt of your letter of April 1st in which you refer to the article in *The Journal of the American Medical Association,* captioned "What's the Matter with Michigan?" published March 23, 1912.

In reply I will state that the mail order medical faker in law does not come within the provisions of the medical act, and every attempt to bring him within these provisions has failed, not only in Michigan but in other states. I called up Mr. J. J. Larmour, the local United States postoffice inspector here, and he informs me that conditions in Michi-

* Page 258.

gan, as regards the medical faker who advertises proprietary remedies, are much better than in the majority of states. He states that the article referred to in *The Journal of the American Medical Association* does not give the real facts, that Illinois, Indiana, and Ohio have a much larger number of these institutions to contend with. Within the past 10 years Mr. Larmour has put out of business fully 50 per cent. of these advertisers of medical cure-alls, existing during his administration in Detroit. As regards the Van Bysterveld Company, referred to in the article, he states a report should be made to the chief postoffice inspector at Washington, D. C.

These advertisers complained of, to the extent of at least 90 per cent., simply sell proprietary remedies in like manner as the druggists sell Castoria, Peruna, Mrs. Winslow's Soothing Syrup, and dozens of other proprietary remedies. It must be borne in mind that the federal officer, such as the postoffice inspector, has at his command not only the federal attorneys, but also detectives and unlimited financial means, as well as authority to investigate records and other methods connected with illegal business. No state law could possibly compete with federal officials with unlimited means and methods at their command. Yours very truly,

B. D. HARISON,
Secretary Michigan State Board of Registration in Medicine.

Bay City, April 3, 1912.

To the Sec'y of Mich. State Medical Society.

Dear Sir:—The editorial published in *The Journal of the American Medical Association* and reprinted in the MICHIGAN STATE MEDICAL JOURNAL is calculated to bring the blush of shame to the face of every self-respecting, legally registered, practitioner of medicine.

The causes of such a condition require an analysis and the means of cure to be carefully sought out and applied.

Why quacks flourish needs no answer when we see the way the public flock after them, just in proportion to the absurdity of their claims and the loudness of their proclamations. If there were no quackery within the ranks of the legalized profession, and every physician were possessed of the highest skill attainable and the most scrupulous honesty with his patients, the number of those on whom the quacks prey would be reduced to the incurable, to those "afraid of the knife," and to those who must have a mystical or religious element at the base of their belief in medicine.

These classes have always, and will always exist, and it remains for the honest physicians to endeavor to protect them against themselves and the rogues who will fatten on their fears and prejudices so long as there is money in it.

Graft and politics are the fundamental causes of the failure to shut these fakers up, and you have only to study the results of the efforts to enforce the pure food laws to see the working of these forces. We have advertising quacks in our city and when efforts to suppress them were made by our medical society we were met by refusal to prosecute by one county prosecutor; or a demand for such evidence as would secure conviction in a court of law, before a *prejudiced* judge. Needless to say such evidence can rarely be obtained.

If our local society should actively enter on a campaign against the local quack, the public would at once side in with the man being "persecuted" as well as prosecuted, and we only aid in advertising him. He pays the newspaper roundly—so long as he is succeeding—for his advertising and they favor him, as against the established physician who will not advertise, *every time*—only one form of the graft.

To be successful in legal measures locally, our county society should be able to place before an official of the state the necessary complaint and evidence and that official should push the prosecution in the local courts. If he met reluctant officials who would not prosecute, his business would then be to bring such officials to the notice of the governor, and have the screws applied. If such an official could point to the governor as forcing him to do his duty, it would save his face politically, and make him much more ardent in his duty. It would seem as if the secretary of the state board of registration was the man whose duty it should be to be the prosecutor, and if his present munificent salary is insufficient to pay him for his trouble then he should have a raise; more pay but not shorter hours.

He could then take some of the time he has left from his onerous task of examining the few men who now come up for registration

and devote it to sweeping away some of the competition in the path of those who have already registered.

The medical profession of Michigan could well afford to pay an assessment of two or three dollars per member each year, and hire a smart firm of attorneys to make a business of securing evidence and prosecuting these carrion eaters. Half a dozen successful prosecutions in a year would soon discourage the tribe and we would not need to spread the news that "Michigan is getting to be unhealthy" for their kind.

Educating the public is an iridescent dream! The public does not want to be educated regarding quackery, and it behooves us to be honest with ourselves and go after the quacks in the interest of our own purses.

Sincerely yours,

CHAS. H. BAKER.

Detroit, April 2, 1912.

Dr. Wilfrid Haughey, Editor, Battle Creek, Michigan.

My Dear Doctor:—In answer to your letter will say that I think Michigan is all right, but I do not know how we can get at fraudulent concerns.

It seems to me it should be the business of the state board of registration, and still it is a question to me if it does not belong to the United States government.

We must first find out whose duty it is to investigate and prosecute these cases, and then we can urge the officers, whose duty it is, to prosecute the concerns.

Yours truly,

J. H. CARSTENS.

Jackson, April 4, 1912.

Wilfrid Haughey, M.D., Battle Creek, Mich.

Dear Doctor Haughey:—I note with a considerable interest your letter of April 1, and do not feel that I am competent to make suitable reply to the article in question. The facts are that there is no defense to be made by Michigan. After the thorough investigation of these fake concerns, by the postoffice department, and the fraudulent character fully exposed, I also feel as expressed in the closing paragraph of the published article, "Why Michigan should be exempted from federal activity is a mystery."

There is no question regarding the illegal status of all the mail-order fake institutions mentioned in the article, and many more which might be mentioned. It is a shame and disgrace to the fair and honorable name of our state to think that law can be so cunningly evaded as in the cases mentioned.

Two years ago I was a witness in supreme court at New Orleans in a case of "fraud and conspiracy" against Dr. Hale, whom you probably remember as being the sponser of several fake medicine concerns. In the trials (four indictments, and three trials) for using the United States mails in forwarding their quack methods, four other so-called doctors were also indicted, with the result that in the three trials, all were found guilty as charged, and the fourth would have gone the same if tried, but the judge did not have the time to try the case.

Now these institutions in Jackson and throughout the state are along the same line, and certainly could be indicted for "fraud and conspiracy" in using the United States mails for forwarding their quack nostrums. Can you give any adequate reason why this has not been done? Certainly I cannot, but see no excuse in permitting the concerns to do business.

I was talking with one of the "Magic Foot Draft" men a short time ago, and they seem greatly elated in saying that they have been before the "department at Washington and upon thorough investigation, it was fully decided that the 'Magic Foot Draft Co.' of Jackson, Mich., was not conflicting in any manner with the laws of the department."

Now by what logic was this accomplished, and why do they continue this traffic in defrauding the public, when it is well known to be, fake, faker, fakerist? I am thoroughly disgusted with the whole thing, admitting that the postoffice department has been doing some fine work in suppressing these imposters. The Magic Foot Draft concern has made barrels of money, and are still doing so at the old stand. People, or rather many people, love to be duped, and perhaps it is just as well that they are, it simply calms the uneasy nature of some people.

Now, doctor, I do not think there is anything in this that will answer the problem in question, I wish there was, but for my life I see no defense in the situation. The only thing

to do is to get in line and stamp out the fakers, the law is on our side, simply enforce it if it is possible.

I remain cordially,

A. E. BULSON.

DETROIT, April 3, 1912.

Dr. Wilfrid Haughey, Editor Journal Michigan State Medical Society.

Dear Sir:—In answer to your letter concerning the editorial, "What's the Matter with Michigan?", I beg to say that in my opinion the matter deserves some serious consideration from the medical profession of the state. The tolerance of these cruel frauds is certainly a reflection on the public spirit of our profession, and indirectly on the good people of the state. The exact method of procedure to rid our state of this odium is a proper subject for discussion. Whether or not the State Medical Society should take official cognizance of the situation is of course a question for the council or the house of delegates to decide.

It seems that one of the most effective methods is that of prohibiting to these frauds the use of the United States mails. Officially or personally it should be possible for our profession to do much to stimulate and assist in this work.

Fortunately the most progressive newspapers have now taken a stand against these money-suckers and may be counted on to render valuable assistance. Spring is house-cleaning time. I propose that we "start something." Very truly,

HERBERT M. RICH.

Grand Rapids, April 3, 1912.

Dr. Haughey, Secretary.

Dear Doctor:—In regard to "What's the Matter with Michigan," the postal authorities are the ones to take up that matter and I believe that all fakes, etc., should be reported to the board of registration by the councilors of the districts.

Sincerely yours,

D. EMMETT WELSH.

Detroit, April 9, 1912.

To the Editor.

The rather trenchant interrogatory phrases of the late editorial comments contained in the March 23 number of *The Journal of the American Medical Association* concerning the capacity and willingness of the state of Michigan for taking and tolerating all sorts of medical charlatanism, constitutes a good basis for reflection.

Michigan has a pretty good law for regulating the practice of medicine, for protection of the people against the incompetency of the fakers; but, of course, no law can protect the community against the lying and dishonesty of the more learned fakers. It is obvious, therefore, that the laity, with all their newspaper education, is incompetent to judge of the truth or value of the various fakers' oral statements or advertisements, and will consequently continue, in a measure, to be the victim of its own superstition and credulity when dealing with these somewhat learned quacks, especially under present legal circumstances. But the community can and should be protected from the horde of ignorant and unscrupulous charlatans which, through newspaper advertisements mainly, succeed in getting the confidence of the credulous.

I do not believe that the people of Michigan are less intelligent or more superstitious than the people of other states, or that the Michigan newspapers and advertising agencies have a lower ethical standard than those of other states; but that the laws for regulating medical practice in Michigan are certainly *not enforced* must be acknowledged. I think that there has been one gang of fakers only eliminated from Detroit during the last few years, and that was accomplished mainly through the efforts of *The Detroit Times.*

While the officers of the law are, of course, primarily to blame for this state of affairs, the newspaper advertising agencies, and the newspapers themselves, must take a share as long as they assume the position of non-responsibility for the statements in their advertising columns, and sell space to anybody for advertising anything short of real houses of prostitution, real burglar combines, or real shell games. A great deal of blame, however, must rest on the advertising agencies, who turn in a great assortment of "stuff" to a newspaper for publication under contract, and if the newspaper criticises, or refuses to publish any of "the stuff" the agencies withdraw some of the good "ads," thus "holding up" as it were, the newspaper. I do not say that all advertising agencies do this, but some do. There are Mammonite advertising agencies as well as other Mammonite business concerns.

They cannot justly ease their consciences (as they are wont to do) by saying we don't know anything about the subject matter, we have no time to look up this and that, the people must attend to their own affairs, defend themselves, etc. This is manifestly unfair, because the people in this case cannot defend themselves. When seeking relief for their real or fancied sufferings they are utterly unable to avoid being cheated or injured, because they do not know how to form a judgment. It is not like buying shoes or neckties, they are unable to judge whether they have or not a dislocated bone, a "stomach trouble" or "liver trouble" (which terms by the way mean nothing at all). In other words the people generally are unable to make a diagnosis of their own cases, and in fact, do not know that many ailments are essentially mental (not structural), such as forms of hysteria, delusion, or hallucination of the sense of feeling and so on. Such cases are hard to manage as we know, and must be treated mainly psychopathically. Such persons are apt to go about seeking every sort of doctor or healer—giving their confidence to the one who most theatrically promises a cure. The extravagant statements or explanations made, the patient cannot or does not comprehend.

Now, what is the remedy? What is the duty of the State? Why, plainly to insist that every medical practitioner whether under the guise of religious hallucinations or not, shall be educated at least upon the topics of human anatomy, physiology, psychology, pathology, bacteriology, and the infectious diseases, before getting a license from the State to practice. Moreover, that the newspapers shall refuse to publish these terribly lying, nasty, and dangerous "ads." In other words, that the law shall hold them responsible for these "ads" as well as other matter published. And finally, that the prosecuting officers shall be made to understand that the people deserve protection from criminal or pseudo-criminal medical charlatans, as much as they do from "assault and battery," "highway robbery," "three card monte," or "gold-brick" fakers.

Now, comical as it may appear, many of these partially educated or partially moral practitioners are raising a cry for Medical Freedom. They want no license, want to undergo no examination. What do they mean? What Medical Freedom? Freedom to lie, or deceive from lack of scientific education or from lack of conscience?

E. L. SHURLY.

HILLSDALE, April 10, 1912.

Dr. Wilfrid Haughey, Secretary of Michigan State Medical Society, Battle Creek, Mich.

Dear Doctor Haughey.—The criticism of Michigan which you reprint from the *Journal of the American Medical Association* is not entirely just. In the first place I question the statement that Michigan is worse infested with patent medicine fakers and fraudulent advertisers than our neighboring states. We have them and regret it as much as others can and would be pleased to have the practical way to get rid of them pointed out. There is a difference between theory and practice.

Our Medical Practice Act, which is the best that the people of the State will approve, fails to reach them. We have no state law that is effective in correcting this abuse. The farthest we have been able to go is to make an offense of all advertising of medical business in which grossly improbable statements are made. Under this provision of our Act a jury must decide from the facts in the case, and juries, as a rule, cannot be convinced of the fallacy of the claims of these fraudulent advertisers. Michigan has a law to prohibit certain classes of immoral advertising, passed at the last regular session of the legislature. This law makes it an offense to advertise remedies for sexual diseases.

The federal authorities only can deal with this problem and they are handicapped by a public sentiment supporting these fakers. Until the people can be educated to a higher estimate of the standards and purposes of the medical profession, this evil must be endured. A campaign of education is going on and will ultimately bring results.

With kindest regards, I am,

Yours sincerely,

WALTER H. SAWYER.

DETROIT, April 10, 1912.

Dr. Wilfrid Haughey, Battle Creek, Mich.

Dear Doctor.—I have nothing to offer at this time upon "What's the Matter with Michigan." I am sure, with our present prosecutor, Detroit

will be able to give these men a warm reception in the near future.

Respectfully,

ARTHUR D. HOLMES.

FINGER PIECE EYEGLASS MOUNTINGS

MUSKEGON, MICH., Feb. 16, 1912.

To the Editor:—An oculist's patient for whom he has prescribed eyeglasses or spectacles would receive much better satisfaction from their use and much less annoyance in learning how to use them if the oculist would pay more attention to directing the patient *how* to use them. No oculist would prescribe any remedy for use locally in the eye or for internal administration without being certain that the patient received full and explicit instructions as to *how* to use it. Neither should he prescribe spectacles or eyeglasses without exercising the same care to be certain that the patient received proper instructions for the use of these spectacles or eyeglasses as a remedy. This is particularly true of the finger piece eyeglass mounting.

The writer has long looked with disfavor on the illustrations got out by manufacturers and commercial houses showing the use of the finger piece eyeglass mounting. Every illustration of this kind that has ever come before me has represented the glasses, when held in the wearer's hand, having the finger piece held between the thumb and first finger.

Finally the writer in an endeavor to have these illustrations of more instructive nature wrote to the American Optical Company of Southbridge, Mass., the following letter:

MUSKEGON, MICH., Nov. 14, 1911.

American Optical Co., Southbridge, Mass.,

Gentlemen:—On the back cover of your November number of "Amoptico" you represent a lady holding a Fits-U eyeglass mounting by the thumb and first finger resting on the finger pieces. In my opinion this is wrong. I have always taught my patients to use the thumb and *second* finger on the finger pieces when putting on or taking off eyeglasses with finger piece mountings. I believe that they can do it much more handily that way. I teach them to use the thumb and second finger on the finger piece with the first finger resting lightly against the bridge.

I think you will find that patients who have never worn finger piece eyeglasses will always fumble about with thumb and first finger when trying to remove the glasses and will have difficulty in placing the tips immediately on the finger pieces of the mounting. Whereas if they are taught to place the tip of the first finger immediately on the bridge when taking off eyeglasses the thumb and second finger will automatically drop on the finger pieces and there will be no uncertain fumbling about and sometimes knocking off of the glasses before they get hold of the finger pieces. Likewise when putting eyeglasses with finger piece mountings in place on the nose, if patients hold the finger pieces between the thumb and first finger they very rarely get the mounting back on the nose to make it hold properly.

I teach them to use the thumb and second finger on the finger pieces, resting the tip of the first finger against the bridge of the mounting. I tell them to push the bridge of the mounting well back with the tip of the first finger before they release the finger pieces, and to keep the bridge pressed back with the tip of the first finger until after the finger pieces are released by the thumb and second finger. I see that patients adapt themselves very quickly to the use of the finger piece mounting when instructed in this way; and they have much less trouble in taking them off and putting them on than they do when using the thumb and first finger.

Very truly yours,

V. A. CHAPMAN.

And in reply received the following letter:

AMERICAN OPTICAL COMPANY

SOUTHBRIDGE, MASS., Nov. 17, 1911.

Dr. V. A. Chapman, Muskegon, Mich.

Dear Doctor:—We were particularly interested in your very kind letter of the 14th inst., and it certainly shows your good will toward us in taking the time you have to discuss a matter which is of importance to us as manufacturers of the Fits-U eyeglass, that is, in reference to the proper way a finger piece eyeglass should be put on and taken off.

Unfortunately it is too late to change our picture, and our posters that we are now sending out, but the point is well taken, and is deserving of being brought to the special attention of the trade.

We are going to get out some illustrations showing the right and wrong way to handle finger piece eyeglasses, and write an article

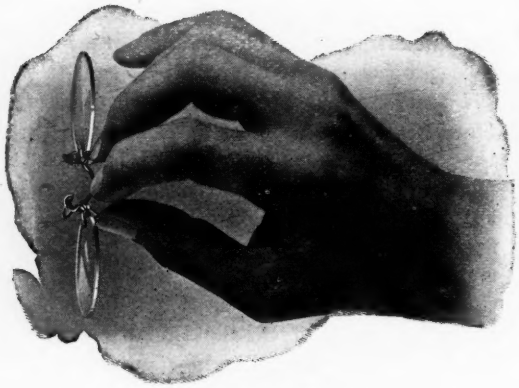
for the next issue of Amoptico, embodying your suggestion and line of argument. This we hope you will find appearing in our January issue, now being prepared. We know you will be interested in seeing it.

Being a close student of such matters, we hope you will take occasion to write us whenever you can suggest important matters of this kind to us, as we very much appreciate your courtesy.

With kindest regards, we are,

Very truly yours,

AMERICAN OPTICAL COMPANY.



The Right Way.

The Wrong Way.

This article which the American Optical Company refers to as to appear in their January issue did appear in the January issue and was substantially extracts from my letter of November 14 which I wrote to them. In that article, however, they did not give me any credit for the suggestion, and they wrote it as being more especially instructions to opticians. Witness the words "and is deserving of being brought to the special attention of the *trade*."

I believe that the subject is one worthy of being brought to the attention of the oculists.

The American Optical Company has kindly loaned to me the cuts which they prepared illustrating this method of placing in position on the nose and removing finger piece eyeglass mountings; and they are shown herewith. These cuts show by illustration perhaps better than can be described by words the method above referred to.

V. A. CHAPMAN.

BOOK NOTICES

W. B. Saunders Company have just issued a new (16th) edition of their Illustrated Catalogue which describes some forty new books and new editions published by them since the issuance of the former edition.

Any physician wishing a copy of this catalogue can obtain one free by addressing W. B. Saunders Company, 925 Walnut Street, Philadelphia.

REPORTS OF THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION. Vol. 4. January to December, 1911. By W. A. Puckner, Director of the Laboratory, American Medical Association, Chicago. Price, 25 cents.

This is a most valuable little volume and should be in the hand of every physician who is interested in clean pharmaceuticals and honesty in their manufacture.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. March 1, 1912. Lea & Febiger, Philadelphia and New York. $6 per annum.

This volume contains in the same concise and easily accessible form the advances in surgery of the head, neck and thorax, infectious diseases, diseases of children, rhinology, laryngology and otology. The index is complete, making reference especially easy.

MICROSCOPY, BACTERIOLOGY AND HUMAN PARASITOLOGY. By P. E. Archinard, A.M., M.D., Bacteriologist, Louisiana State Board of Health and City Board of Health, New Orleans. New (2d) edition, thoroughly revised. 12mo, 267 pages, with 100 engravings and 6 plates. Cloth, $1 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

This little book is a handy handbook of the facts and methods of bacteriology, microscopy, etc. The illustrations are good, and the text clear but brief, making the book useful as quick reference. Each chapter is followed by a series of questions, as an aid in preparing for examinations, recitations, and to fix the subject matter of the chapter more firmly in mind.

PHYSIOLOGY. A Manual for Students and Practitioners. By A. E. Guenther, Ph.D., Professor of Physiology in the University of Nebraska, and Theodore C. Guenther, M.D., Attending Physician, Norwegian Hospital, Brooklyn. New (2d) edition, thoroughly revised. 12mo, 269 pages, illustrated. Cloth, $1 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

This is a concise treatise on physiology designed primarily for students. It is a ready reference for the more important facts of physiology, but does not pretend to be a minute or complete work.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume 1, Number 1. Octavo of 133 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published bi-monthly. Price per year: Paper, $8; cloth, $12.

These clinics are a faithful reproduction of Dr. Murphy's valuable discussions while giving clinics. Dr. Murphy's fund of pathologic information is profusely drawn on and a perusal of these clinics is a liberal education in the pathologic differentiation of the numerous cases met with in every-day practice. He is a firm believer in relieving the patient as well as correcting the pathologic condition in surgical work. The Clinics are neatly and artistically put out in a form lending itself readily to permanent binding, when one would have a valuable book. The first number is well illustrated and has only one drawback, which is present in much clinical teaching — the results are not shown.

RECENT METHODS IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS (The Wassermann Reaction and Ehrlich's Salvarsan, "606"). By C. H. Browning, M.D., Lecturer on Bacteriology in the University of Glasgow, and Ivy McKenzie, M.D., Director, Western Asylums' Research Institute, Glasgow. Octavo of 303 pages. Cloth. $2.50 net. Lea & Febiger, Philadelphia and New York, 1912.

A very valuable, useful and altogether desirable book, giving in an unbiased manner the results of the experience of these authors with salvarsan. The reviewer finds many points of practical value in this work and feels justified in recommending it to those seeking up-to-date information on the subject.

A commendable effort at classification of conditions in which this treatment is beneficial as well as other conditions in which it is dangerous is an important feature. The tabulated table of fatal cases with post-mortem findings is invaluable.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago, and Frederick Peterson, M.D., Professor of Psychiatry, Columbia University. Seventh edition, revised. Octavo volume of 932 pages, with 338 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5 net; Half Morocco, $6.50 net.

The seventh edition of this valuable work is to a great extent a rewritten book, embodying advances, new theories and much new information. The section on mental diseases is entirely rearranged to comply with later ideas of classification. The chapters on such subjects as pellagra, poliomyelitis and pituitary disease are almost entirely new, owing to the great advance in our understanding of these conditions.

The book continues the same excellent illustrations with the addition of many new ones, and is well up to the standard of excellence established by these authors.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world, edited by Henry W. Cattell, A.M., M.D. Volume 1, 22d series. Philadelphia and London: J. B. Lippincott Company, 1912. $2.

This volume contains an interesting article by Cyriax of London on the treatment of facial paralysis with special regard to nerve friction. He reports some good results with this treatment. The article by James J. Walsh of New York on "The Masks of Diabetes" is especially valuable, pointing the way as it does of clearing up many doubtful diagnoses. Simon Flexner's article on "Experimental Poliomyelitis" is valuable. The volume maintains the high standard long ago established by this series.

THE PRACTICAL MEDICINE SERIES. Vol. IX, Skin and Venereal Diseases and Miscellaneous Topics. Edited by W. S. Baumy and H. N. Moyer. Series 1911. $1.25. Vol. X, Nervous and Mental Diseases. Edited by Hugh T. Patrick and Peter Bassoe. Series 1911. $1.25. Chicago: The Year-Book Publishers. Series, $10.

These two books are valuable in keeping up to the times in the fields covered. No man can keep entirely up to date in all subjects by original reading and research, but these books offer a method of reviewing and keeping abreast in the various fields. Sources of new facts, and references and given.

THE TAYLOR POCKET CASE RECORD. By J. J. Taylor, M.D. 252 pages. Tough bond paper. Red limp leather. $1. The Medical Council Co., Philadelphia.

The object of this book is to encourage more accurate observation and study of cases by supplying a convenient form for a condensed record of each important case, in pocket size, so that the practitioner can have it always with him, and so arranged that the necessary data can be written down in the briefest possible time—preferably while the examination is actually being made.

Thoroughness of examination is encouraged by means of a Syllabus, detailing all the points that should be considered in each case.

The blank for the first thorough examination diagnosis and treatment is followed by spaces for sixteen subsequent visits.

The book provides for 120 cases.

SCIENTIFIC FEATURES OF MODERN MEDICINE. By Frederic S. Lee, Ph.D., Dalton Professor of Physiology, Columbia University, New York. The Columbia University Press, 1911.

This is the series of Jesup lectures delivered at the Museum of Natural History, New York, in February and March, 1911, and the Scientific facts are told as nearly as convenient in language suitable for laymen. The lectures are in a measure popular but the subject matter is well chosen, presenting the problems of modern medicine in a way that cannot but be a benefit to all concerned, both the layman anxious to learn and the physician who must minister to him.

OPERATIVE OBSTETRICS, Including the Surgery of the New-Born. By Edward P. Davis, M.D., Professor of Obstetrics, Jefferson Medical College, Philadelphia. Octavo volue of 483 pages, with 264 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50 net.

It is a genuine pleasure to review this book. The subject is masterfully handled. Each statement is so clear and distinct that there is left no possible chance to misunderstand the author's meaning. While there may be an honest difference of opinion in some instances, all must agree as to the scientific and professional correctness of those advanced by this author. Normal and manual delivery and all minor as well as major operations are carefully explained and complete technic is given. The application of forceps under all conditions is fully and clearly described, with the dangers, accidents, and methods to avoid them noted. The chapter on Version is good. The illustrations, as do all throughout the work, show clearly the points discussed in the text. That on Embryotomy shows how rapidly this operation is being supplanted because of our better understanding of Cesarean Section and Pubiotomy. Description of the two latter and Suprasymphyseal Section close part second of the work.

Part three is devoted to Surgery of the Puerperal Period. It includes Removal of the Placenta, Lacerations, Operations for Septic Infections, Mastitis and Injuries, Fracture, Hernia, Circumcision, etc., on the child. The information, hints and experiences contained in this book we believe far exceed its money value to any one doing obstetrical work.

A HANDBOOK OF PRACTICAL TREATMENT. In Three Volumes. By 82 Eminent Specialists. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania, and A. O. J. Kelly, M.D., Late Assistant Professor of Medicine, University of Pennsylvania. Volume III. Octavo of 1095 Pages. Illustrated. Philadelphia and London: W. B. Saunders Co., 1912. Per volume: Cloth, $6.00 net; Half Morocco, $7.50 net.

This volume completes the work of practical treatment by Musser and Kelly. The immense value is apparent; but the fear arises that its very magnitude will prevent it reaching many who might profit greatly from it, but who may not require all it contains. Many of the articles would have made commendable monographs. In volume three most of the articles on diseases of the digestive system are good. Outlines of the surgical treatment of certain conditions of the stomach, intestines, liver, pancreas, peritoneum, etc., are given. The articles on Bronchoscopy and the Infections, Suppurative and Tubercular Diseases of the Lungs and Pleura are excellent. There is

an article on Defects of Speech, that while it deals with the subject as exhaustively, perhaps, as the space will allow, tells far too little of the technic of the treatment to be of practical aid to the practitioner. The short article on Diabetes Mellitis with the diet tables giving the calories per ounce and gram is practical and useful. The article on Scurvy especially that of bottle fed children is valuable and timely. Diet is made a prominent feature in the treatment of many conditions but a warning is sounded as to the alcoholic content of Kepfer and Kumiss.

It is unfortunate that the good things told in the chapters on Broncho-Pneumonia, Chronic Intestinal Pneumonia, Abscess of the Lung, Gangrene of the Lung and Tumor of the Lung could not have been written in smoother English.

As faulty expressions we note the use of "in" page 62 line 23, "both....as well as" page 93, line 12.

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1912, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies:"

Atophan is 2-phenyl-quinolin-4-carboxylic acid, $C_9H_5N.C_6H_5.COOH$, 2 : 4. The substance was first described by Doebner and Ciesecke in 1887. Its therapeutic action was described by Nicolaier and Dohrn in 1908. It is insoluble in water but readily soluble in alkalies and has a slightly bitter taste.

It is said to be useful in gout, particularly in the acute attacks, acting more promptly than colchicum and without undesirable by-effects. In gout the dose is from 0.5 gm. (7½ grains) four times a day to 1 gm. (15 grains) three times a day suspended in large quantities of water. To prevent the precipitation of free uric acid from the urine, sodium bicarbonate may be administered simultaneously. In articular rheumatism daily doses of 3 to 5 gm. (45 to 75 grains) are prescribed.

Atophan is also marketed in the form of tablets, each tablet containing 0.5 gm. (7½ grains). Schering & Glatz, N. Y. (*Jour. A. M. A.*, March 2, 1912, p. 633).

Cornutol is a biologically tested liquid extract of ergot. Dose, hypodermically, 0.65 to 2 c.c. (10 to 30 minims); by the mouth 0.65 to 4 c.c. (10 to 60 minims). The date of testing appears on each package. Cornutol is put up in 1 ounce vials and in ampules, each containing cornutol 2 c.c. (30 minims). H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, March 9, 1912, p. 701).

Digitol is a biologically and chemically standardized, fat-free tincture of digitalis, corresponding in drug strength to tincture of digitalis, U. S. P. Dose, 0.3 to 1 c.c. (5 to 15 minims). The date of testing appears on each package. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, March 9, 1912, p. 701).

Eucodin is methyl-codeine bromide, $C_{13}H_{21}O_3N(CH_3)Br$. It is easily soluble in water. It corresponds to 80 per cent. of codeine and to its own weight of codeine sulphate. It is said to be useful as a sedative as a substitute for codeine, especially in cough, where its action sometimes favors secretion. Dose, 0.06 gm. (1 grain).

Eucodin is also marketed in the form of tablets, each tablet containing eucodin 0.05 gm. (5-6 grain). Riedel & Co., New York (*Jour. A. M. A.*, March 16, 1912, p. 780).

Euscopol is optically inactive scopolamine hydrobromide $C_{17}H_{21}O_4N.HBr$. It is easily soluble in water and alcohol. It closely resembles the official scopolamine hydrobromide in its physical, chemical and pharmacologic properties. It is claimed to have a milder action because of the absence of other alkaloids said to be contained in the natural scopolamine hydrobromide. Riedel & Co., New York (*Jour. A. M. A.*, March 16, 1912, p. 780).

PHARMACEUTICAL PREPARATIONS OF ACCEPTED ARTICLES

Tablets, Oxyntin with Pepsin, each containing Oxyntin 0.3 gm. (5 grains) and pepsin equivalent to pepsin, U. S. P., 1 grain.

Capsules, Oxyntin with Nux Vomica, each containing Oxyntin 0.3 gm. (5 grains) and Nux Vomica equivalent to tincture Nux Vomica 0.33 c.c. (5 minims).

Capsules of Holadin, Bile Salts and Phenolphthalein, each containing Holadin 0.13 gm. (2 grains), Bile Salts, Fairchild, 0.03 gm. (½ grain), Phenolphthalein 0.065 gm. (1 grain).

Capsules of Holadin, Succinate of Soda and Bile Salts, each containing Holadin 0.20 gm. (3 grains), Sodium Succinate Exsiccated 0.20 gm. (3 grains) and Bile Salts, Fairchild 0.03 gm. (1-2 grain).

Capsules of Bile Salts, Succinate of Soda and Phenolphthalein, each containing Bile Salts, Fairchild 0.065 gm. (1 grain), Sodium Succinate, Exsiccated 0.20 gm. (3 grains), and Phenolphthalein 0.03 gm. (½ grain). (*Jour. A. M. A.*, March 16, 1912, p. 780).

MISCELLANEOUS

PUBLICATIONS ON THE HOT SPRINGS OF ARKANSAS

Two publications on the hot springs of Arkansas recently issued by the department of the interior—the first annual report of the medical director of the reservation and a circular of general information—are of interest to physicians because they deal with a health resort which has almost unrivaled therapeutic resources, but which has suffered to some extent from adverse social and medical conditions.

By act of April 20, 1832, congress provided that four sections of land in the territory of Arkansas including the springs, a total of 2,560 acres, should be reserved from sale or entry in order tnat they might be preserved in perpetuity for the benefit of the sick. When the state of Arkansas was created the federal government still retained the ownership of the four sections, but did not reserve the jurisdiction. By later acts the size of the reservation was reduced to 911 acres, the present area. All of the springs are on the government reservation, but there has grown up around them the city of Hot Springs, over which the government has no jurisdiction or control. The result was that the city of Hot Springs became what is known as a "wide-open" town. The result of the gambling which was carried on openly, the horse-racing, and the unethical practice of many local physicians in "drumming" for patients was that many persons returned to their homes thoroughly disgusted with the conditions. Fortunately these conditions have largely passed away. Gambling is no longer carried on openly, horse-racing has been discontinued, and the government has suppressed the practice of "drumming" by placing inspectors on all the trains. In September, 1910, the government took another great step by the appointment of a medical director to have full supervision of sanitation, hygiene, and all that pertains to the bathing of patients. Prior to this time the federal government's administration of the Hot Springs Reservation was conducted entirely under a superintendent, and in no instance had this official been a medical man, nor had there heretofore been any direct medical supervision over the operations of the bathhouses. The report of the medical director is the first official publication by the department of the interior dealing directly with the medical problems involved.

Under the supervision of the medical director considerable progress has been made in bettering those conditions that are of especial interest to practitioners of medicine. Two new sanitary bathhouses, fully equipped and provided with a complete blast system of ventilation, have been constructed at a cost of between $125,000, and $150,000 each, and a third has been entirely remodeled, enlarged, ventilated, and made sanitary in every respect. Under existing policies the twenty other bathhouses now operating will be remodeled or torn down and rebuilt as rapidly as is consistent with the maintenance of an uninterrupted service for the sick.

The report of the medical director gives an account of the problems with which that officer has to deal; the general circular contains information regarding the history of the resort, the government reservation, the city of Hot Springs, the pay bathhouses, the Army and Navy General Hospital, the government free baths, the character and action of the waters, and the rules relating to physicians.

SMALL-POX AND VACCINATION

During the first three months of 1912, there were reported 283 cases of small-pox in Michigan. The vaccination history of these cases is as follows:

2 cases vaccinated "50 or 60 years ago."
3 cases vaccinated "14 years ago."
1 case vaccinated "years ago."
1 case vaccinated "at the time of exposure."
1 case vaccinated "12 years ago."
1 case vaccinated "infancy and again 10 years ago."
1 case vaccinated "about 10 years ago."
1 case vaccinated "some 20 years ago."
1 case vaccinated "one week after exposure."
10 cases vaccinated "about 3 years ago" (some doubt).

1 case vaccinated "some years previous."
2 cases vaccinated "in childhood."
2 cases vaccinated "when very young."
1 case vaccinated "30 years ago."
2 cases vaccinated "6 years ago."
1 case vaccinated "2 years ago."
1 case vaccinated "4 years ago."
1 case vaccinated "5 years ago."
5 cases vaccinated "doubtful if ever."
245 cases "never vaccinated."

283 Total.

It costs Michigan $150,000 a year to take care of indigent small-pox patients and to protect the unvaccinated.

R. L. DIXON, Secretary.

GREATER HARPER HOSPITAL

On May 1 ground will be broken for the construction of the Buhl Building donated by the heirs of Theodore D. Buhl. This building will cost $100,000, will be 80 feet square and will contain, in the basement, baths and all compliances for mechano-, hydro- and electro-therapy. The first and second floors will be devoted to the out-patient department, the first floor being the waiting room, offices, medical and medical specialty clinics. The second floor will be devoted to the surgery and surgery specialty clinics. The third floor, at present, will be a flat for 20 interns including an assembly room, library, bath and all conveniences. This floor will be so arranged that at a future date it may, if desirable, be turned into a research laboratory. The fourth floor will be devoted to clinical and research laboratories. The fifth floor will be devoted to animal experiment work and operations.

The work of the construction of the Service Building and Surgical Pavilion of the new Hospital is now one-half completed. The service building is designed for the accommodation of 600 patients. The surgical pavilion will provide for 200 beds. As soon as the present construction is completed work will begin on the Medical Pavilion and Administration Building. The Medical Pavilion will accommodate 200 beds. Then the present Hospital will be razed and the private patient department, also 200 beds, will be constructed on John R. Street. The total cost of these various buildings will amount to $1,000,000 and will give Detroit a Hospital adequate in size, and one of which she may well be proud. It will place Detroit on the Map in the matter of Hospital facilities. The new out-patient department and research laboratory will be a distinct advantage in clinical teaching.

The administration of the Hospital is unique. There is a lay board of trustees and a Medical Board, each consisting of five members which sitting jointly will have charge of the administration of the Hospital. The Medical Board is composed of the Chief of the first (General) Surgical Department, Chief of the second (Special) Surgical Department, the Chief of the Medical Department, the Chief of the Ophthalmological, etc., Department and the Chief of the Pathological Department. Dr. H. O. Walker was Chief of this Medical Board but upon his death was succeeded by Dr. C. G. Jennings. Further unique provision of the medical board is that the Chiefs of the various departments are to be appointed each year and not more than four of the five may be reappointed in any one year. The object being to secure a rotation in office as regards the administration management, there being several in each staff who might be considered eligible for Chieftainship.

INSURANCE EXAMINATION FEES

Insurance companies doing business in Michigan who are paying the flat $5 rate for examinations:

Aetna, Hartford, Conn.
American Central, Indianapolis, Ind.
American Bankers, Chicago, Ill.
Banker's Reserve, Omaha, Neb.
Berkshire, Pittsfield, Mass.
Connecticut Mutual, Hartford, Conn.
Equitable Assurance, New York.
Germania, New York.
Hartford Life, Hartford, Conn.
John Hancock Mutual, Boston, Mass.
Manhattan, New York.
Massachusetts Mutual, Springfield, Mass.
Mutual, New York.
Mutual Benefit, Newark, N. J.
National, Montpelier.
New England Mutual, Boston, Mass.
Northwestern Mutual, Milwaukee.
Pacific Mutual, Los Angeles.
Penn Mutual, Philadelphia.
Phoenix Mutual, Hartford, Conn.
Provident Life and Trust, Philadelphia.
Reliance Life, Pittsburgh, Pa.
State Mutual, Worcester, Minn.

We would be glad of any information that will keep this list correct.

SURGICAL SUGGESTIONS

[From *American Journal of Surgery*]

Vesical calculus is very common among the Chinese, appendicitis very rare.

Creeping infants may gather wood splinters or needles in their hands or knees and abscesses in these localities should suggest such an etiology.

When it causes suppuration, a foreign body is usually easily found; but if there be difficulty in locating it, it is better to be content with drainage for a few days rather than expose uninfected areas by a prolonged search.

A subcuticular whitlow is often the superficial expression of a deep infection. After removing the raised epidermis carefully inspect the tissue beneath for a small opening. If this is neglected the process may speedily advance to the tendon sheath.

When dealing with a sliding hernia don't attempt to separate the large bowel from the sac; this attachment carries the blood-supply of the gut. Free the sac, not the intestine, and reduce with the bowel as much of the sac as is attached to it.

Active hemorrhage from a gastric ulcer is rarely fatal; the weight of evidence indicates that it is better to operate after than during the bleeding. Active hemorrhage from a duodenal ulcer is often fatal; operate as soon as the diagnosis is made.

Gastro-enterostomy should not be performed unless there is, or is deliberately made, an obstruction in the duodenum or at the pylorus. If these remain, or become patent, the food will not be diverted through the artificial channel.

A needle fragment in the fleshy palm, where the muscles are compact and in more or less constant activity, will be displaced more in a few hours than one in the sole of the foot, where the intrinsic muscles are deeper, less compactly disposed and less active, and where, also, the dense plantar fascia sometimes holds the needle.

In the palm, foreign bodies, by reason of the direction of the thrust, often point toward the dorsum, and in a general way toward the center of the wrist; and such movements as they undergo by muscular contractions carry them further in those directions.

The sooner a hollow bone is opened in acute osteomyelitis, the less will be the destruction of bone.

In intestinal obstruction, it is not the operation that is to be feared, but the delay in operation.

When there is disagreement between the pulse and temperature, the pulse must be regarded as of the greater importance.

A felon should be aborted by covering the end of the finger with cotton saturated with alcohol, and then excluding the air by drawing over all a rubber finger cot.

When Kocher's method fails to reduce a recent dislocation of the shoulder, it is usually because the surgeon has proceeded too rapidly. Deliberately is the only way to work quickly.

Traumatic aneurysm, after temporary clamping of the artery, can often be treated by suture if the surgeon goes about it deliberately, when at first impression the case seemed to demand ligation and obliteration of the vessel.

A ligature should not be placed on the carotid too near the bifurcation lest the clot which forms shall not have sufficient surface to which to adhere and become detached and swept to the brain.

If the surgeon desires to discover carcinoma of the cervix in a curable stage women past middle life must be examined periodically, for to wait until symptoms appear is often to discover the disease too late.

In injuries to the cord, if the tendon reflexes are preserved, even slightly, the surgeon may exclude complete and irremediable severance of the cord; but the total loss of these reflexes during the first few days is not conclusive, as the loss may be transitory.

In performing external esophagotomy, the trachea is the guide for finding the esophagus. It is easy to remember that there is nothing but the esophagus between the trachea and vertebral column.

MEMBERS IN ARREARS

"Your Committee recommends that on May 1 of each year THE JOURNAL of the State Society be discontinued to all subscribers and members in arrears, and that such members be reported to the secretary of the American Medical Association as "dropped for non-payment of dues." — *Report of Business Committee unanimously adopted by House of Delegates, Sept. 29, 1910.*

"We recommend the publishing in the May JOURNAL each year the names of all members still in arrears April 15 for current dues."—*Report of Business Committee unanimously adopted by the House of Delegates, Sept. 28, 1911.*

In accordance with the foregoing resolutions we publish herewith the names of all those who, according to the secretary's books, were delinquent on April 15:

Alpena County Medical Society

No delinquents.

Antrim County Medical Society

Long, Chas., Elk Rapids.

Barry County Medical Society

Fuller, D. E., Hastings.
Gallagher, R. V., Battle Creek.
Lowry, G. W., Hastings.
McIntyre, C. S., Woodland.
Mohler, C. D., Hastings.
Rigterink, J. W., Freeport.
Ryan-Roehrig, Alice M., Hastings.
Russel, C., Kansas City.
Sheffield, F. G., Hastings.
Shilling, F. F., Nashville.

Bay County Medical Society

Hammond, L. C., Bay City.
Stone, A. T., Bay City.
Stone, D. F., Bay City.
Trumble, G. W., Bay City.
Urmston, Paul R., Bay City.
Zaremba, A. J., Bay City.

Benzie County Medical Society

No delinquents.

Berrien County Medical Society

Belknap, F. R., Benton Harbor.
Curtis, Orville, Buchanan.
Gowdy, F. M., St. Joseph.
Helkie, W. L., Three Oaks.
McKenzie, J. C., New Buffalo.
Merritt, C. M., St. Joseph.
Scott, A. H., St. Joseph.
Sowers, C. N., Benton Harbor.

Branch County Medical Society

Culver, B. W., Coldwater.
Sears, Carl, Quincy.
Turner, S. R., Batavia.

Calhoun County Medical Society

Adair, R. T., Battle Creek.
Barnhart, Samuel E., Battle Creek.
Elliott, J. A., Battle Creek.
Foster, I. C., Albion.
Gething, J. W., Battle Creek.
Hoyt, A. A., Battle Creek.
Hobbs, E. J., Galesburg.
Kellogg, J. H., Battle Creek.
MacGregor, Arch. E., Battle Creek.
Pearce, H. R., Battle Creek.
Parmeter, E. L., Albion.
Powers, H. A., Battle Creek.
Putnam, W. N., Battle Creek.
Read, A. J., Battle Creek.
Risley, E. H., Loma Linda, Cal.
Ryan, C. W., Battle Creek.
Shipp, W. S., Battle Creek.
Shurtleff, H. A., Marshall.
Van Camp, E., Athens.
Vanderveort, L. E., Battle Creek.
Zelinsky, Thos., Battle Creek.

Cass County Medical Society

Irwin, D. H., Marcellus.

Charlevoix County Medical Society

Armstrong, R. B., Charlevoix.
Sweet, Chas., East Jordon.

Cheboygan County Medical Society

MacGregor, A. B., Cheboygan.

Chippewa County Medical Society

Maloney, F. J., Sault Ste., Marie.
Rogers, T. N., Sault Ste. Marie.
Ross, Zimmerman, St. Ignace.

Clinton County Medical Society

Dunn, F. C., St. Johns.

Delta County Medical Society

Bjorkman, Geo., Gladstone.
Laing, A. L., Rapid River.
Summerbell, F., Nahma.

Dickinson-Iron County Medical Society

Alving, Otto, Iron Mountain.
Brasseur, J. B., Norway.
Budde, Alfred E., Big Food Prairie, Ill.
Darling, A. M., Crystal Falls.
Larson, F., Crystal Falls.
McBurney, W. M., Stainbaugh.
Newkirk, H. A., Iron Mountain.
Thomas, A. H., Ironwood.

Eaton County Medical Society

Knight, F. J., Charlotte.
Stimson, C. A., Eaton Rapids.

Emmet County Medical Society

Hicks, A. R., Harbor Springs.
Runyan, E. A., Harbor Springs.

Genesee County Medical Society

Charles, Henry L., Swartz Creek.
Cogshall, Bela, Flint.
De Somoskeoy, V. H., Flint.
Gillett, Jesse, Flint.
McCormick, W. H., Flint.
McDonald, C. F., Goodrich.
McGregor, J. C., Flint.
Pearson, C. B., Baltimore, Md.
Switzer, A. M., Fenton.
White, P. E., Clio.
Wright, A. G., Fenton.

Gogebic County Medical Society

Conley, W. C., Ironwood.

Grand Traverse County Medical Society

Carrow, Flemming, Traverse City.
Fenton, G. L., Kingsley.
Gauntlett, J. W., Traverse City.
Johnson, Guy, Traverse City.
Martin, J. B., Traverse City.
Moon, W. E., Traverse City.

Gratiot County Medical Society

No delinquents.

Hillsdale County Medical Society

Allegar, W. E., Pittsford.
Frazier, H. H., Moscow.

Martindale, E. A., Hillsdale.
Stoner, I. J., Osseo.
Whelan, B., Hillsdale.

Houghton County Medical Society

Abrams, J. C., Calumet.
Abrams, E. T., Dollar Bay.
Anderson, A. H., South Range.
Arminen, K. V., Duluth, Minn.
Betteys, W. H., Houghton.
Bourland, P. D., Lake Linden.
Clark, J. W., Calumet.
Conrad, G. A., Houghton.
Dodge, W. H., Hancock.
Farnham, L. A., Pontiac.
Jackson, W. S., Houghton.
Joy, H. M., Calumet.
La Berge, A. T., Calumet.
Lambert, O. B., Escanaba.
Lee, S. S., Osceola.
Maas, R. J., Houghton.
McDonald, N. S., Hancock.
Macqueen, D. K., Laurium.
Matchette, W. H., Hancock.
MacRae, John, Calumet.
Mills, A. B., Calumet.
Orr, G. W., Lake Linden.
Rhines, James, Mohawk.
Roche, A. C., Kearsarge.
Tucker, A. R., Mohawk.
Turner, J. G., Houghton.
Vercellini, C. E., Calumet.
Yarrington, C. W., Calumet.

Huron County Medical Society

Corcoran, J. S., Ubly.
Francis, A. M., Port Austin.
Johnston, Henry, Caseville.

Ingham County Medical Society

Robertson, Perry C., Ionia.
Thomas, F. E., Mason.
Wetmore, Mary, Bellingham, Wash.

Ionia County Medical Society

Allen, T. R., Ionia.
Barnes, W. L., Atlanta, Ga.
Beckwith, E. F., Ionia.
Dorr, F. W., Belding.
Peabody, Chas. H., Lake Odessa.
Snyder, E. M., Lake Odessa.

Isabella County Medical Society

No delinquents.

Jackson County Medical Society

Leece, Robert H., Munith.

Kalamazoo Academy of Medicine

Barnabee, J. W., Kalamazoo.
Bartholemew, C. A., Martin.
Bernstein, E. J., Kalamazoo.
Bills, W. H., Allegan.
Bosman, J. W., Kalamazoo.
Bulson, G. A., Vicksburg.
Butler, P. T., Kalamazoo.
Chase, Milton, Otsego.
Clark, L. E., Otsego.
Cronk, Fred J., Guthrie, Okla.
Cornish, G. W., Lawton.
Den Blyker, W., Kalamazoo.
Giddings, A. M., Youngstown, Ohio.
Grant, F. E., Kalamazoo.
Heasley, H. W., Burnyps Corners.
Hutton, A. M., Oshtemo.
Lang, W. W., Kalamazoo.
Lewis, H. F., Chicago, Ill.
Leighton, N. E., Hopkins Station.
Light, S. R., Kalamazoo.
Maxwell, J. Chas., Paw Paw.
Myers, C. M., Dowagiac.
Osborn, Don P., Kalamazoo.
Onontiych, P., Plainwell.
O'Dell, J. H., Kalamazoo.
Osmun, E. D., Allegan.
Pitz, H. R., Bradley.
Robinson, A. L., Allegan.
Rogers, L. V., Galesburg.
Shepard, B. A., Kalamazoo.
Smith, Malcolm, Allegan.
Stewart, J. D., Hartford.
Upjohn, W. E., Kalamazoo.
Walker, B. D., Kalamazoo.
Webster, Ben, Tracy, Ind.
Welsh, F. J., Kalamazoo.

Kent County Medical Society

Annis, L. C., Cedar Springs.
Apted, Ralph, Grand Rapids.
Baert, Geo., Grand Rapids.
Bassett, M. G., Grand Rapids.
Bayer, Herman, Saginaw.
Berge, F. E., Grand Rapids.
Bloodgood, J. C., Grand Rapids.
Brady, John, Grand Rapids.
Breece, R. C., Ada.
Cardwell, J. F., Grand Rapids.
Catlin, H. W., Grand Rapids.
Chappell, G. H., Grand Rapids.
Chappell, L. E., Grand Rapids.
De Coux, R. H., Grand Rapids.
De Kraker, J. M., Grand Rapids.
De Pree, P. J., Grand Rapids.
De Vore, J. A., Grand Rapids.
Dingman, H. W., Grand Rapids.
Edie, J. O., Grand Rapids.
Edwards, J. S., Grand Rapids.
Fabian, J. J., Grand Rapids.
Fairbanks, C. H., Grand Rapids.
Fuller, R. W., Grand Rapids.
Fuller, Wm., Grand Rapids.
Graybiel, A. G., Caledonia.
Heasley, J. A., Grand Rapids.
Hilliker, J. B., Grand Rapids.
Hirschberg, Frieda, Grand Rapids.
Hodgen, John T., Grand Rapids.
Holcomb, J. N., Grand Rapids.
Hooker, C. E., Grand Rapids.
Hutchinson, R. J., Grand Rapids.
Innis, J. H., Grand Rapids.
Kassabian, N. H., Coopersville.
Kelly, C. M., Grand Rapids.
Kenning, J. C., Grand Rapids.
Kinsey, F. C., Grand Rapids.
Locher, H. E., Grand Rapids.
McDonnell, O. C., Lowell.
Miller, P. S., Grand Rapids.
O'Keefe, T. B., Grand Rapids.
Pyle, H. J., Grand Rapids.
Read, L. C., Grand Rapids.
Roberts, M. E., Grand Rapids.
Robertson, F. D., Grand Rapids.
Rogers, John R., Grand Rapids.
Rooks, J. J., Grand Rapids.
Sarber, H. O., Rockford.
Schurtz, Perry, Grand Rapids.
Slemons, Clyde C., Grand Rapids.
Urquart, R. T., Grand Rapids.
Vis., Edward W., Grand Rapids.
Wallace, D. J., Sparta.
Webb, Rowland, Grand Rapids.
Weaver, Chas. E., Grand Rapids.
Wright, J. M., Grand Rapids.
Young, R. A., Moline.

Lapeer County Medical Society

Blake, Wm., Lapeer .
Chamberlain, G. L., Lapeer.
Chapin, C. D., Columbiaville.
Frazier, J. V., Lapeer.
Haynes, H. O., Lapeer.
Marsh, P. E., Otter Lake.
May, Robt. J., Metamora.
McCausland, M. B., Imlay City.
O'Brien, D. J., Lapeer.
Robinson, Wm. J., Lapeer.
Wisner, C. A., Columbiaville.

Lenawee County Medical Society

Clemes, W. T., Blissfield.
Colbath, W. E., Fairfield.
Hendershot, E. E., Tecumseh.
Morden, W. S., Macon.
Nixon, J. W., Holloway.
Wagner, G. W., Adrian.
Westgate, Clarence, Weston.

Livingston County Medical Society

No delinquents.

Macomb County Medical Society

Greenshields, Wm., Romeo.
Greenshields, R., Romeo.
Moriarity, E. H., Mt. Clemens.
Parkin, R. L., Romeo.
Scott, F. A., Washington.
Wiley, H. H., Utica.

Manistee County Medical Society

Kelley, F. J., Address unknown.

Marquette-Alger County Medical Society

Bergeron, G. D., Negaunee.
Gordeau, A. E., Ishpeming.
Lindgren, Ilmar, Ishpeming.
O'Brien, S. J., Grand Marais.
Toms, C. B., Seney.

Mason County Medical Society

Force, Wm. Howard, Ludington.

Mecosta County Medical Society

No delinquents.

Menominee County Medical Society

Charles, C. H., Goodman, Wis.
Mason, Stephen C., Hermansville.

Midland County Medical Society

Dougher, E. J., Midland.

Monroe County Medical Society

No delinquents.

Montcalm County Medical Society

Avery, John, Greenville.
Bachman, N. E., Stanton.

Muskegon County Medical Society

Ayling, G. H., Minooka, Ill.

Newaygo County Medical Society

Denike, A. James, Hesperia.
Geerhlings, W., Reeman.
Whitehead, Chas., Newaygo.

Oakland County Medical Society

Bird, J. T., Clarkston.
German, F. D., Franklin.
Greene, E. C., Foxborough, Mass.
Johnson, Fred L., Holly.
Lockwood, F. W., South Lyon.
Manley, Ora, Highland.

O. M. C. O. R. O. County Medical Society

Harris, L. A., Gaylord.
Kiehl, H. B., Rose City.
Lister, Geo. F., Hilman.

Ontonagon County Medical Society

Cox, A. H., Winona.
Rumph, C. L., Green Bay, Wis.

Osceola-Lake County Medical Society

Barnard, T. H., Tustin.

Ottawa County Medical Society

Dowker, A. E., Goodrich, North Dakota.
Mabbs, J. A., Allegan.
Mowers, J. H., Fennville.
Peppler, J. F., Byron Center.
Thomas, G. H., Holland.
Van Den Berg, J. W., Holland.
Walling, J. S., Coopersville.

Presque Isle County Medical Society

Campbell, Alex. W., Posen.
Larke, B. G., Rogers City.
Monroe, Neil C., Millersburg.

Saginaw County Medical Society

Beckwith, B. H., Saginaw.
Bell, G. A., Saginaw.
Bradley, N. R., Saginaw.
Brock, W. H., Saginaw.
Bruce, J. D., Saginaw.
Crane, B. F. A., Saginaw.
Curtis, E. E., Saginaw.
Ferguson, G. H., Saginaw.
Florentine, F. B., E. Eaginaw.
Freeman, F. W., Saginaw.
Grigg, A., E. Saginaw.
Harris, Leon B., Saginaw.
Kanzler, Karl, Saginaw.
Longstreet, Martha, Saginaw.
McLandress, J. A., Saginaw.
McMeekin, J. W., Saginaw.
Pierce, Franklin S., Beaverton.
Rogers, A. S., Saginaw.
Sample, C. H., Saginaw.
Stewart, G. W., Saginaw.

Sanilac County Medical Society

Dick, W. K., Applegate.
Simenton, George, Marlette.

Schoolcraft County Medical Society

No delinquents.

Shiawassee County Medical Society

Bailey, E. H., Corunna.
Bailey, A. L., Chesaning.
Cramer, G. L. G., Owosso.
Cudworth, Linn M., Perry.
Eldred, J. N., Chesaning.
Elliott, E., Chesaning.
Fritch, O. B., New Lathrop.
Gooding, A. S. H., Owosso.
Harper, W. I., Byron.
Hiltz, P. D., Birmingham.
Hixon, L. D., Durand.
Johnstone, E. R., Bancroft.
Parker, W. T., Corunna.
Phippen, S. S. C., Owosso.
Ruggles, F. S., Byron.
Stewart, L. B., Chesaning.
Van Liew, V. C., Lennon.
Watts, F. M., Owosso.

St. Clair County Medical Society

Bostwick, Walter E., Algonac.
Dunn, R. J. Port Huron.
Ross, George, Capac.

St. Joseph County Medical Society

No delinquents.

Tri County Medical Society

No delinquents.

Tuscola County Medical Society

No delinquents.

Washtenaw County Medical Society

Barrett, A. M., Ann Arbor.
Baskett, L. W., St. Peter, Minn.
Britton, H. B., Ypsilanti.
Burr, Thomas S., Lewisport, Newfoundland.
Crawford, Katherine L., San Francisco, Cal.
Gates, N. A., Ann Arbor.
Haythorn, S. R., Pittsburgh, Pa.
Joyce, T. M., Rochester, Minn.
Kositcheck, Sol. B., Chicago, Ill.
Keating, J. W., Ann Arbor.
Kline, G. M., Danvers, Mass.
Lane, C. S., Whitmore Lake.
Merkel, Chas. W., Springport.
Noble, Kenneth, Milan.
Oberlin, Emily Myers, Philadelphia, Pa.
Plummer, R. C., Ann Arbor.
Pearson, H. J., Ann Arbor.
Rexford, Walter K., Powell River, B. C.
Sample, John T., Baltimore, Md.
Woods, John Thomas, Chelsea.

Wayne County Medical Society

Address, Detroit, unless otherwise stated.
Abbott, A. W., 266 Putnam Ave.
Agnelly, E. J., 552 Dix Ave.
Ames, J. W., 157 Gratiot Ave.
Arndt, O. H., 6 Jay St.
Baker, W. L., 1159 39th Ave.
Baruch, J. B., 334 Fort St. E.
Baskerville, R. J., 401 Washington Arcade.
Bell, Samuel, Gas Co. Bldg.
Blodgett, W. E., 602 Fine Arts Bldg.
Boylan, W. M., 92 Westminster Ave.
Brownell, W. S., 270 Woodward Ave.
Carmichael, R. H., Hamtramck.
Cooper, J. M., 610 Fine Arts Bldg.

Courville, C. W., 316 Grand River Ave.
Delbridge, J. J., 894 Woodward Ave.
Duggan, G. S., 118 Elm Street.
Fenner, W. A., 1425 Mac Ave.
Fischer, O. E., 507 Field Ave.
Fisher, G. A., 106 Broadway.
Gailey, J. K., 415 Washington Arcade.
Garner, H. B., Gas Office Bldg.
Gratton, J. H., 182 Chene.
Griffith, A. J., 698 Roosevelt Ave.
Grimes, Wm. S., 42 Clifford St.
Harris, George C., 543 Trumbull Ave.
Harrison, J. W., 429 E. Grand Boulevard.
Harvey, John G., 211 Stevens Bldg.
Haskins, Mary G., 270 Woodward Ave.
Henderson, E. W., 846 Vermont Ave.
Hensel, R. D., 111 Park St.
Herbert, Leo. H., 2225 W. Jefferson Ave.
Hislop, R., 752 Grand River Ave.
Honor, W. H., Wyandotte.
Howard, J. J., 705 Morrell Ave.
Hubel, John T., Ray Court Apt.
Hurst, Alice, 172 Bethune Ave. W.
Ives, A. W., 608 Gas Co. Bldg.
Johnson, A. H., 717 Rivard St.
Judd, C. H., 32 Adams Ave. W.
Kenning, Thos., 218 Vinewood Ave.
Kipp, A. W., 31 W. High St.
Lawton, T. M., 669 Trumbull Ave.
Layton, M. A., 1980 Fort St. W.
Leiman, Richard, 1672 Gratiot Ave.
Leonard, C. B., 608 Washington Arcade.
Loranger, P. J., 383 CantonAve.
Maguire, F. J. W., 778 Jefferson Ave.
McClurg, David, 2795 Woodward Ave.
McCormick, F. T., 232 Smith St.
McDonald, F. J., 1491 Woodward Ave.
McEachern, A. D., 250 W. Fort St.
McFall, Guy H., 503 Washington Arcade.
McMahon, H. O., 106 Broadway.
Merritt, E. D., 409 Washington Arcade.
Millard, Frank A., 271 Woodward Ave.
Morley, C. H., 747 Woodward Ave.
Muenz, Carl F., 365 Kercheval Ave.
Neary, J. H., 654 Grandy Ave.
Pilcher, F. E., 1940 GrandBlvd.
Radzuiski, A. J., 1519 Michigan Ave.
Raible, H. F., 510 Joseph Campau Ave.
Reilly, Frank A., 930 Trumbull Ave.
Roberts, F. J., 1500 Chene.
Robinson, Gilbert, 1520 Chene St.
Rothschild, Douglas, 509 Breitmeyer Bldg.
Sanderson, Phil. G., 270 Woodward Ave.
Schnell, A. C., 168 Kercheval Ave.
Scriber, Geo. H., 1112 Mt. Elliott Ave.
Sherman, A. T., 205 Trumbull Ave.
Sherrill, E. S., 270 Woodward Ave.
Sill, Joseph, 41 Warren Ave.
Starrs, F. C., 250 15th St.
Steinbrecher, A. H., 410 Woodward Ave.
Toepel, O. T., 466 Joseph Campau Ave.
Wallace, H. I., 32 Adams Ave. W.

MEDICAL FREEDOM

The "Medical Freedomites" have again attempted to show that the American Medical Association is trying to corner the healing market of the United States. Judging from their advertising matter, it would seem that each member of the A. M. A. is a villain trying to prevent any but the members from applying means of healing. They then apologetically state that they do not refer to local physicians, all of whom they respect and honor.

To decry the American Medical Association is to decry most of the best physicians of America, since the majority of the leading physicians in every community are members of the A. M. A., and do have something to say about its management.

The A. M. A. is *our* Society, and we are proud of it because of the high standards for which it contends. It has always tried to put down that which is inferior and worthless in the line of healing or health and support those things which been proved scientifically to have value. It has done more to raise the standard of medical education than any force in America. *It has discriminated against no college or creed which has shown itself willing to put its institution on a plane worthy of recognition.* It has encouraged and helped many weak medical schools to raise their standards and become efficient. When it demands so much in preparation for its own members, why should it not decry in bold terms all those insufficiently prepared who try to foister themselves on the public as equal in ability to those who have been trained. When local citizens decry the A. M. A. they only help to tear down high standards of scientific investigation and put in its place substitutes which are unworthy the endorsement of our citizens.—*Bulletin* Kalamazoo Academy of Medicine.